# HOUSING AND CITIZENSHIP . . . .

## A STUDY OF LOW-COST HOUSING

BY GEORGE HERBERT GRAY

REINHOLD PUB

# HOUSING AND CITIZENSHIP

*A Study of Low-Cost Housing*

*by*

***George Herbert Gray, F.A.I.A., A.I.A.***

*Consultant in Architecture and City Planning*

A thoroughgoing survey of all phases of the housing problem is presented in this large, handsomely illustrated volume. Tracing the situation back to its sociological and economic roots, Major Gray carefully analyzes the factors which have brought about the distressing conditions now existing in most American cities, and shows to what extent these had been overcome in Europe up to the beginning of the war. The chapters on housing in England, Holland, Russia, France and the Scandinavian countries are exceptionally timely.

The primary purpose of the book is to present a sound, well-coordinated plan for future low-cost development in the United States. This plan is solidly backed up by conclusions drawn from the author's long experience as city-planning consultant. He describes in detail, and with abundant illustrations, the numerous pioneer housing units constructed in this country during the past twenty years. He attacks the problem of rents in an intelligent and vigorous manner, and discusses all the sociological implications of the "ill-housed third" of our population. His thesis is that *healthy and responsible citizenship is dependent on adequate living accommodations for the masses.*

With 47 full-page plates and thirteen graphs, as well as numerous tables of data on pertinent matters, this volume will be essential reading, not only for architects, and city planners, but for economists, sociologists, teachers, and leaders in all fields of civic life.

**REINHOLD PUBLISHING CORP.**

330 West 42nd Street, New York 18, N. Y.

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By

GEORGE HERBERT GRAY

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*Consultant in Architecture and City Planning*

*New Haven, Conn.*

*With a Foreword by C.-E. A. WINSLOW*

*Recent President of the National Association of Housing Officials; Chairman of the Housing Authority of New Haven; Special Consultant to the United States Housing Authority*

REINHOLD PUBLISHING CORPORATION

330 WEST 42nd STREET NEW YORK 18, U. S. A.

1946

*To*

## MARY BELKNAP GRAY

MY WIFE, MY PARTNER IN ALL MY WORTHWHILE UNDERTAKINGS, FROM WHOSE EARLY INTEREST IN HOUSING MY OWN INTEREST HAS STEMMED.

## Foreword

Major Gray's book is particularly timely. We stand at the crossroads in American housing. The war has temporarily closed our first period of active construction of low-rent housing, and we can profitably look back and evaluate our accomplishments. Today, we must embark on a new and much more extended program and it behooves us to get our bearings for the voyage ahead.

Major Gray has given us an admirably sound and scholarly review of the forces which have been at work in the housing movement in this country and in Europe in the past. Furthermore, his wise judgment and philosophical vision offer a most helpful chart for the future. This book should fill a very real place and a lasting place in the history of the American housing movement.

Major Gray's untimely death has deprived us of a friend whose place cannot be filled; but in this volume he has left us a lasting memorial which will carry his earnest and constructive leadership far into the future.

C.-E. A. Winslow.

New Haven, Conn.
December, 1945

## What Is Our Housing Problem?

We conceive our Housing Problem to be the creation of a supply of dwellings such that every family may have the opportunity of living in wholesome surroundings. This aim is generally recognized to involve a program in which there shall be co-operation by private industry, by local governments and and by the federal government. Since the problem is nation-wide and involves fundamental social and economic policies affecting the entire nation, it is generally further recognized that the federal government should assume the leadership in bringing about the necessary co-operation and should assume responsibility for determining the broad lines of the necessary program.

## Acknowledgements

The author wishes to express his appreciation for assistance and courtesy which have come to him from a multitude of sources, so many that he regrets it is not feasable to mention all. In addition to credit given in the text and in footnotes for supplying information and photographic material, he wishes to acknowledge the almost unfailing cooperation of the various Federal Housing Agencies, of a large number of local Housing Authorities, and particularly of the Building Center of London for use of illustrative material from their "Housing, a European Survey"; of the British Information Service, the Netherlands Information Bureau, of Sovfoto, the Swedish Bureau and Swedish-American News Exchange; of the editors of *Architectural Forum*, *Architectural Record*, and *Pencil Points* for their cooperation in collecting many photographs necessary for the illustrations and for permission to use their line drawings. The author is deeply indebted to his friends who have been good enough to read all or part of the typescript (mostly when in an early formative state) and to make constructive suggestions: to Elizabeth Coit, who read an early draft of the entire text; to Professor Mauriee R. Davie, who read parts on urban growth and certain sociologic aspects; to Professor Ellsworth Huntington, who read parts on environment in relation to civilization; to Professor Arnold L. Gesell, who read the chapters on the influenee of environment on child life; to John Ihlder, who read the chapter on Adjusted Rents; to Fredrick Bigger and William Stanley Parker, who read the section of the growth, deterioration and reelamation of cities; finally to Dr. C.-E. A. Winslow, who read the entire text in approximately its final form and made valuable suggestions. While their comments have left the author with the impression of general approval, it is not to be inferred, however, that any of these may have given complete endorsement to such of the script as they read; moreover, there have been many changes during the progress of the writing.

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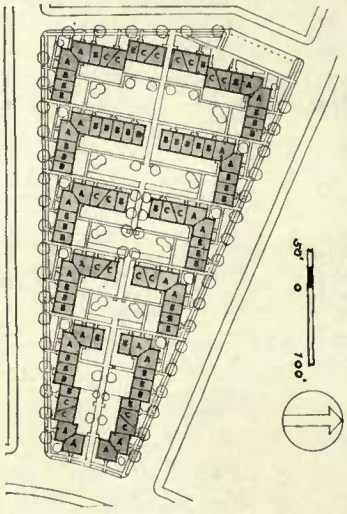
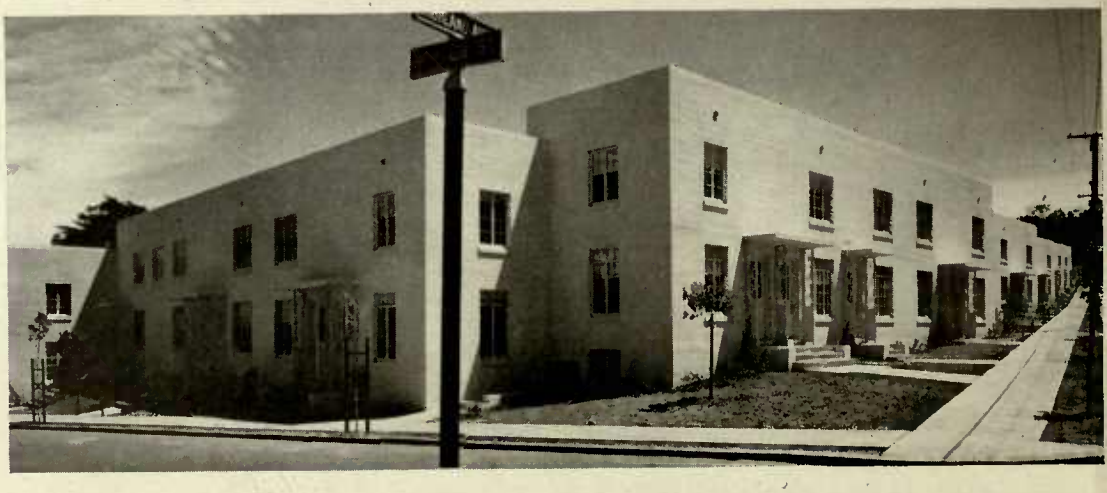



Exterior walls of cast concrete, showing texture of forms. Architectural effect obtained by extreme simplicity, fine proportions, good texture, and by the variety of planes, levels and vistas resulting from a plan broadly conceived and logically adjusted to the sloping site. Note suitability of small courts as play areas for young children within sight of parents. Acreage 2.78; coverage 36%; density 160. Photographs by Roger Sturtevant.



# INTRODUCTION: THE SCOPE OF THE HOUSING PROBLEM

The American public, or at least a part of it, has for some time been aware of the serious housing situation which makes it necessary for great numbers of families to live in unsanitary and unwholesome houses—a situation which exists north and south, east and west, in rural areas, in villages, small cities and great metropolitan areas; it has become aware of the striking manner in which unsanitary and inadequate housing bears upon our entire social and economic structure. It is also fast becoming aware that to improve housing in any adequate and permanent manner means consideration of many problems which are fundamental both to our local government and to our federal government. It was interesting, no doubt surprising to many, that in the 1940 political campaign the principle of public responsibility for housing, which had been accelerated by the Democratic administration, was accepted and endorsed by the Republican candidate.

The house, the home, is the immediate environment into which our citizens are born, in which their early life is moulded, in which they spend the mature years of their responsible citizenship, in which they should find happiness, rest and inspiration, from the cradle to the grave. The proportion of people which rises above their environment is small. Those gifted minds, backed by strong characters, which do succeed in rising out of a slum environment, are but a demonstration that native worth is not limited to the families of the prosperous. For every Abe Lincoln who rises to the full stature of his native abilities there are untold numbers who lack the peculiar combination of native gifts and fortuitous circumstances to overcome the obstacles in their path. Whether or not the people make the slums, or the slums make the people, housing experience has convincingly demonstrated, as we shall see later, that, given improved conditions of living, nine out of ten of the slum population will rise out of a slum way of living.

But the home environment neither begins nor ends at the doorstep. It extends into the neighborhood. And so the problem grows. The goal of good housing means a wholesome way of living; and that involves the whole neighborhood. Because the replanned neighborhood must fit into the plan of the city, neighborhoods in turn involve the whole city. Only a few of our cities have plans—plans that are official and comprehensive and are authoritative guides for the present and future growth of the city. So the problem of our bad urban housing has brought us face to face with a consideration of planning for the future of our cities. And it is likewise true that the slum conditions of our rural areas also have brought us face to face with considerations of the future of our rural life.

Ways and means of mastering the situation bring us into many complications, one of the most grimacing of which is the problem of financing—comparatively simple if better housing meant only the building of new houses to rent at or near cost. At the outset it may involve the destruction of old houses, not public property, private property. Here we meet our first obvious line of resistance. We are confronted by the "status quo." Property rights have come to be sacred, in the minds of many the most sacred, in our fast growing materialistic development; they are protected by our Constitution. "Life, liberty and the pursuit of happiness"? Yes, but since all men were declared to be free and equal it has commonly come to be assumed that in a land of "equal opportunity" each could find and guard his own security of these blessings. But are the opportunities equal? The opportunity to live in a wholesome environment seems to involve questions of subsidies; it involves the income of the worker, the cost of building, as well as of land, and the question of taxation. Such are some of the tangled threads.

In tracing the origin of slums and of the lack of a supply of good housing we discover how degenerating to our cities has been the age old practice of housing a large part of the population in the cast-off housing of the more prosperous. We also discover the futility of both philanthropy and of investment for profit in eradicating slums, and the futility of prohibitive legislation in increasing the supply of good housing. We discover that to arrest the spread of blight we must restudy the city plan and rehabilitate our cities so as to replace the obsolete plans with plans geared to the progress of the twentieth century.

As the reader may have sensed for himself, there has been bitter opposition by certain "private enterprise" groups to government subsidies, and bitter open attacks on the administration of the United States Housing Authority (USHA). Alleged contributors to the high cost of housing, both among industrialists and organized labor groups, have been subjected to fire by the Department of Justice. While the principles of public housing have been very generally accepted, methods are still controversial. There is one point of view which looks upon housing as primarily a domain for the investment of capital; another point of view which looks upon it as primarily an investment in citizenship, and between these points of view there are inevitable clashes, as there were between those who were interested in producing horse-drawn vehicles and those interested in producing gas-powered vehicles.

The desirability of home ownership, either by the individual or through co-operative groups, and the salutary effect of such ownership on responsible citizenship seems to be quite generally recognized. The experiences of certain foreign countries are of especial interest because they demonstrate the feasibility of extended home ownership through various types of governmental aid and through co-operative ownership;

and since some foreign countries are a full generation ahead of us in dealing with the housing problems in its many aspects, we must also look into their experience in all phases of housing. For this study we have selected a number of northern European countries which in varying degrees are comparable to the United States. Out of their great variety of experience we should also find other valuable suggestions as to policies, standards of living, designing, financing, and producing.

Over the country as a whole our experience in large scale housing is relatively brief. The activity of the U. S. government in housing began in World War I. During and following that War, industry supplied many large scale housing projects for its own workers. Private enterprise provided some large scale projects for urban tenants, particularly in and about New York. At the end of the decade after World War I under President Hoover, it was with the slogan "no more poverty" that the government advanced its interest and inaugurated research in the domain of urban and rural housing. Under the Roosevelt administration interest progressed to the point of definite programming and of active participation; unfortunately, however, in the early years of the depression, and to some extent up to 1941, relief of unemployment was an objective, a justification and to some extent a confusing motive in the housing program. But despite the many agencies which have been operating there is still an extensive no-man's-land of housing, co-operative housing has scarcely been touched, and in none of our cities has the rehabilitation of blighted areas got under way.

The various measures adopted, since the early 1930's, in urban and rural areas to meet the housing needs of various income groups deserve a careful review and an evaluation, from the point of view of both material accomplishment and of contribution to the development of better housing technique. Quite a number of these were experimental agencies and have died out; a few became well established, each, for the most part, in a fairly well defined domain. These domains are (a) aids to housing for those with incomes insufficient to pay normal rent or to own their own home, and (b) those whose incomes are so small that some subsidy is necessary, if they are to live decently. Within the domain of normal rents the principal government agencies have been, in the urban areas the Federal Housing Agency (FHA) and the several organizations operating through the Home Loan Bank Board, notably the Federal Savings and Loan Associations and the Home Owners Loan Corporation (HOLC); while in the rural areas we find certain of the agencies in the Department of Agriculture, in recent years largely concentrated in the Farm Security Administration (FSA). Within the domain of subsidized housing it was the United States Housing Authority which operated in both the urban and the rural areas. In the development of the various urban housing agencies, there was a general tendency toward decentralization of responsibility for the initiation and administration of housing, and a tendency toward limiting the activities of the federal government to pointing out the national factors of the problem, and to establishing a series of financial aids made possible by government because of its ability to borrow (and hence to lend) money at very low rates. This decentralization has been accelerated since the merging of agencies in the National Housing Administration early in 1942. *See Table II, p. 34.*

Because people and their income, rather than buildings, mark the starting point for housing studies, the long-range national program must study the sizes of families, their incomes, their varying regional and racial culture, their geographic and social shiftings, the varying characteristics of city and rural families, bearing in mind the effect of environment on crime, health and education and the need of accessibility of the projects to centers of work, schools and other community facilities. There must be a continuing study of the income restrictions for eligibility to public projects. Questions of employment and labor bear upon incomes and, because of the labor that goes into production, these questions bear also on the cost of living, specifically on housing. So we find ourselves tangled up with the building industry, with land values and taxes and a whole complex of social and economic problems, which we will have to take up in detail.

All the factors which we have outlined underlie the principles involved in designing the housing project—the buildings and their grouping in an organized neighborhood. In this field also we still have much to learn from foreign achievements. The present expansion and research in industry suggests that in the post-war period we may have at our command new materials and more fabricated units—yet we must avoid basing our plans on crystal gazing.

Because a wholesome sunlit home environment is fundamental to clean, efficient living and loyal citizenship, good housing is a matter of national concern. For these same reasons, and also because of the imperative need of economic municipal administration and the arrest of the spread of "deficit areas," it is of vital concern to our municipalities. Further, underlying the housing problem is the problem of incomes insufficient to pay for decent home surroundings, for food adequate for efficient living, clothing and for medical care, and this income problem also is national in scope. Since colonial days we have, in principle at least, recognized the duty of communities to supply shortages in the fundamental necessities of life. Subsidized housing would seem to be one of the ways by which the present generation is realistically approaching a bad housing situation which they have come to recognize as existing.

Much of this book was written when the recent world turmoil was in its early stages, before many of

us realized that the conflict was to become a challenge to our own way of living, here in America.* One might think on first consideration that in this time of crisis we should forget for the moment our ideas of improved housing for normal conditions. But second thought presents the reasons for the turmoil and conflict and the reasons for the enthusiasm of the zealots who made up the rank and file as well as the leaders of the armies of the Nazis, whether in khaki or in tweeds. And what are these reasons? An under-privileged nation means under-privileged citizens. Primarily, at least ostensibly, Nazi ideology was planned to give to under-privileged Germans their full share of privileges, a better way of living, more butter and coffee, more and better clothes, better housing, better jobs and more joy in life. However unhappily this plan for German betterment might affect other countries, certainly it promised Germans, particularly the youth, something to fight for, the hope of changing their position from an assumed economic subjugation to economic domination. The under-privileged citizen with no hope for better conditions is apt to have no great enthusiasm for his citizenship. To whatever extent our own citizenship faces an under-privileged condition in the future, to that extent the nation faced the danger of a lack of sustained enthusiasm for the prosecution of the war and for the ensuing peace objectives. During World War I the British decided that to those fighting at the front they owed better housing after their return, and on a large scale they made good in the two-decade interim between wars.

Our boasted American standard of living is something of a myth in so far as it applies to a great mass of the population. This becomes evident when we face the fact that, as disclosed by the special census of 1935–36 (when the dip in the depression rose to near normal) two thirds of all families had less than $1450 a year, and one third *of all families had less than $780—from that to next to nothing.* In many families such incomes imply food of poor nutritive value, poor clothing, and poor housing—a slum environment for the rising generation. Despite the huge crop of gangsters generated in our slums, there is not as yet a general realization of the effect of environment on citizenship. Far less is it understood that the actual cost to the taxpayer for good housing, even when subsidized, is small by comparison with many public costs which we take for granted. The housing situation is readily curable. It means an investment in citizenship. Like all other important investments, it calls for long-range planning.

We say long-range planning, for it does not seem likely that in war, even less so than in the defense period, normal housing (housing other than that needed in the expansion of the war program) could be expected to be the most immediate objective. But the programming, the broad planning for the post-war period could be started at once and be perfected for the day of actual building. And the special housing needed for various workers in the war program should be just as far as possible, part of a permanent and comprehensive national housing program. It was encouraging, indeed, that this principle was promptly adopted by the Council of National Defense and that, for the carrying out of the policy, a Housing Co-ordinator was appointed. It was discouraging that the policy was even to any small extent nullified,—as was anticipated by some it would be—through the urging of temporary expediency and local demands for exceptions, over and above the actual exigencies of the situation. But new hope for rectifying any cause for criticism was realized in the Presidential order of early 1942, merging all war housing (excepting the rural housing under FSA) in the Federal Public Housing Authority.

A part of the public is still wondering why government must come into the housing picture. It was Lincoln who pointed out that any public policy can be counted on to last, only when a reasonably large part of all groups approve it. So the writer attaches importance to making it clear to those who remain skeptical, that up to the present private capital has not been able to supply, on a profitable basis, good housing for families of very low income, that the situation can be improved only by local and federal government, through direction of and aids to various types of low-cost housing. It is to make this clear that the "Case History of New York City" is set forth, and likewise the story of housing in foreign countries.

A definite period of the development of public housing in the United States under normal conditions may be considered as having closed with the beginning of the emergency preparations for total defense. That period of development grew from seeds which were planted in the last war; the housing techniques then developed were applied during the 1920's to housing built by private enterprise—commercial, co-operative and philanthropic; federal interest in housing for families of low income developed in the 1930's. The change from normal procedure to emergency procedure for total defense marked a pause, a transition period, during the course of which we could most profitably review and appraise our past efforts and accomplishments. Similarly an era of better housing in Europe for the most part came to a close in 1939, and there too, even more urgently than with us, new housing will be needed. Because our own policies are still in the making, the past experiences and policies of these foreign countries are of importance to us. In the light of the current world cataclysm and readjustments, in the light of all the varied factors bearing on the problem, we should seek an end of slum breeding, seek a solution for the ultimate goal of good housing, namely a good neighborhood environment for all citizens. This housing problem is destined to become a major one in the days of reconstruction. In its solution we should also

* Publication has been delayed in large part by a sequence of priorities, affecting particularly the plate work.

find an aid, if not the key, to the rehabilitation of our cities; or it might be put the other way around, so closely are the two interlocked.

In the past, for lack of co-ordination, there have been many false steps, besides many misunderstandings and bickerings, departmental rivalries and jealousies among our housing agencies. For reasons arising from the war-time emergency, as well as from the conditions of post-war times, a comprehensive and unified program or plan is more needed now than ever. It is needed in order that war housing may fit into permanent housing; that housing privately financed, whether through government aid or otherwise, may make its full contribution; that subsidized housing may be available to a wider range of that large portion of the population which, without it, cannot have good housing and must continue to generate in slums. The Presidential order co-ordinating all federal urban housing agencies through the National Housing Agency, also provides for a research organization, and research is the first step toward planning. Yet even this organization could navigate a surer course if it were part of an organization including also all rural housing and especially if it had for consultation a group of citizens chosen from among those with special interests and knowledge pertinent to housing questions, but not identified with the point of view of any one agency or group of agencies.

More specifically, to assure, in the not too distant future, an adequate supply of good housing for all citizens, we need a long-range Housing Program, based on a study of all the conditions which we have been outlining. In the preparation of such a program there is need of a Federal Council on Housing, membership of which should include representatives of all federal housing agencies, rural as well as urban, and the consultant citizens' group mentioned above.

And what is our housing problem? How did it come about? Just where does the federal government and the local government come into the picture? What about other countries—have they any experience from which we can profit? How big a job is our housing problem? What sort of a start has been made? Where will it lead us? What are the ways and means which have been devised for untangling the many economic and social threads, of weaving all these strands into a fabric of national housing policy which will be truly comprehensive? It cannot be solved or even considered in a vacuum. To answer the questions raised and to provide the public, those connected with the many housing authorities, and the rising generation, particularly the student group which must face this problem—to provide them with one book covering the broader phases of our housing problem in its inter-relation to our social and economic structure this book is written.

Having thus outlined the scope of our problem, we shall now proceed by showing how we in the United States have come by our bad housing, the various measures which, beginning over a century ago, we have taken to improve the situation; we shall consider the basic political, economic and social principles underlying the policy of governmental aid to low-cost housing; we shall summarize the policies and accomplishments of the past decade, and give a more detailed appraisal of the accomplishments of each federal agency; by way of better gauging these accomplishments and that we may profit by their experiences we will review the experiences of a number of comparable countries in Northern Europe. We shall discuss some of the social and economic principles underlying the solution of the housing problem, the nature of the population to be housed, the growth, obsolescence and rehabilitation of our cities, the factors entering into the cost of housing. Finally we shall consider the Design of housing, basing our discussion in part on the character of designs which have been produced by the various governmental housing agencies and suggesting possible points for improvement; also we shall outline the principles of site-planning. To avoid interruption of the major theme some of the more statistical and technical discussion has been reserved for the appendix.

While housing deals primarily with humanity and no discussion of it can divest itself wholly of humanitarianism, nevertheless in our presentation of the subject we have endeavored to walk the path of scientific objectivity.

# PART I. THE HISTORIC AND PHILOSOPHIC BACKGROUND OF HOUSING

## SECTION I. THE HISTORIC BACKGROUND IN THE UNITED STATES

### The General Picture

In the first years the colonists of necessity lived for the most part in the simplest of make-shift shelters and paid a heavy toll to rigorous winters in the north and to malaria in the south.[1] When their permanent homes were built, they had generally an abundance of open space and abundance of material to build the kind of houses best suited to their ways of living. When the older New England coastal towns became too congested, pioneers started new towns in the primeval inland areas, thus long preserving the open out-door way of living centering around the green of these older colonies. In these northern colonies, until the early decades of the eighteen hundreds, the unlimited land lasted and with it new opportunities for the rising generation. During this same period, at the falls of streams in hill country water power was harnessed to turn machines in small mills and factories.

It was nearly a century and a half ago in the northern colonies that these small factories up in the hill country began to give way to the steam-powered factories along the larger and often navigable streams. Today a relic of a pre-revolutionary town, Plymouth, home of grandfather clocks, looks down from its Connecticut hill-top onto Thomaston on the Naugatuck River, its modern clock-making successor.[2] Weaving, furniture making and other indoor occupations were transferred from farm to factory, from hilltop to valley. The farm ceased to be a self-supporting unit. The rural life centering around the village was thrown off its balance. Many of the young folks on these farms were attracted to the cities by the higher factory wages. Terry took his young clockmakers and others from Plymouth to Thomaston. The prosperity of the rural areas diminished for lack of hands to work them and sooner or later many farms were impoverished—the first seeds of *rural* slum conditions.

It was somewhat over a generation later that railroads became general, following as a rule the low levels of the coast and valleys. They also in their turn accentuated the concentration of populations in the cities and the over-crowding of existing housing occupied by the workers. Following that, the newcomers from the country came in, crowding the old houses near the factories, while the more prosperous of the town folks built new houses where town and country met. These two factors, industrialization and the first railroads, started the first segregated *urban* slum areas in most of our cities of those times.

[1] The first English colony on an island at Jamestown in 1607 was abandoned for a less malarious location on the mainland.

[2] "The Connecticut Guide," E. L. Heermance, State Planning Board, Hartford, Conn., 1935, p. 133.

Next came the extension of the railroads to the west and the opening of the great new agricultural regions, and with it a further depletion of the population of the less productive rural areas of the northern states—for them more impoverishment and run-down rural housing. Another effect of the western roads was to further stimulate the commerce of the cities and so to further congest their population.

Before the Civil War the slaves on the southern plantations were the planters' most valuable asset and so were supplied with such housing as was then considered reasonably good—one room cabins, with a low score for room over-crowding and a high score for spacious site planning. *See Plate II, p. 20.* But the war left the majority of planters with overgrown fields, their depleted equipment rusty and decrepit, and with no financial resources to buy new equipment nor to hire labor to reclaim the fields. The best the planter could do was to let the former slaves continue to live with their families on the plantations, to allow each a plot of land for his own subsistence crops, to supply equipment and fertilizer so far as he could, and in return for the negro's labor on the plantation, to share with him the crops—share and share alike. There was no capital and no time to build new shelter and little of either with which to repair the old. So over a vast and fertile area of the country the old slave quarters went from bad to worse and spread the let-down ways of living that always attend bad housing. Such conditions were not conducive to wise tillage, fertilization or other measures necessary to conserve the soil. Eventually erosion and exhaustion of the soil completed the picture in many parts of the south. Living became harder, housing worse. Crop-sharing had largely deteriorated into a form of peonage. When, within the last decade, the Department of Agriculture undertook to improve rural housing as a part of farming and rural living conditions in the south, it had to tackle this entire depleted economic structure with all its social implications.

The Civil War stimulated the expansion of northern industries so that they were well equipped to take advantage of the trade arising from the rapidly developing territory of the great west, even to the Pacific coast. The new territory supplied more raw materials. Industry sought new markets abroad. Manufactured exports increased from $17,580,456 in 1850 to $40,345,892 in 1860, to $102,856,015 in 1880. With this further expansion of factories came further urban congestion and depletion of the rural population in the older northern sections of the nation, while in the south came stagnation.

So, with the native labor all employed and no new supply available at home, it was toward Europe that the industrialists began to look for workers. Living was cheap in Europe, wages were low; and American industry sought to import its labor from those countries where wages were lowest and incidentally living conditions most meagre—first, after the Revolution, from Ireland and various other parts of Great Britain; later, particularly after the Civil War, from various parts of continental Europe. If America was to compete with Europe for world markets, she would have to keep her labor costs down, in line with European costs, otherwise they might offset the advantage of abundant raw materials. It was in 1840 that regular steamship service began, cutting the time from England from several weeks to ten days. In the following decade immigration jumped from 68,000 to 228,000.

When the immigrants got to our shores they were commonly expected to be content with housing which was doubtless assumed to be no worse than that to which they were accustomed in the old countries. The greatest volume of immigrants were landed in New York, where comparative figures prepared in 1894 showed that the congestion was greater than in any large European city. The figures showed 143.2 people per acre for the island of Manhattan, against 125.2 in Paris; 10th Ward of New York 626.2 against a similar area in Prague (the worst in Europe) of 485.4; Ward A, 986.4 per acre against 759.6 for Bombay, the next densest known population in the world.[3] This congestion was brought about by narrow streets, buildings commonly six stories high, with little space left for yards or light courts, by room over-crowding and by using cellars for dwellings. Sanitary facilities were meagre, the majority of rooms ill-lighted, and conditions generally filthy. Into such slums the immigrants were herded—but more of the story of New York housing a little later.

Other cities along the Atlantic seaboard bred their slums, not so large nor so densely populated as in New York, but equally run down and unsanitary. Even the small cities had their shack slums in the outskirts—on the dumps and about the railroad yards. From 1860 to 1890 most of the seaports doubled their population and some trebled them. The new cities of the middle west were growing even faster. New houses were built for those who could afford them, and what they abandoned were remodelled with more and smaller rooms for those who could afford nothing better.

Cities vied with one another for big populations, but the housing was left to take care of itself. The accepted theory was that the supply would meet the demand, and after a fashion it did—but in a manner reflecting no credit on the run of the slum dweller's employers (sometimes their own fellow immigrants of earlier decades), no credit on the municipalities, or on a great and prosperous democracy. Housing for the poor was the business of nobody, except those who could get enough rent from run-down property to pay the taxes and other carrying charges until the expanding business area of the city should overtake them and pay handsomely for their land. To keep carrying charges down, no repairs were made and the houses went from bad to worse. As the more fortunate citizens at the top improved their condition, there was a continuing supply of out-moded houses and the more run-down and obsolete they became the more they were crowded. The law of supply and demand was working, but how?

There were exceptions to this general rule, dating back to the early periods of industrial expansion. Francis Cabot Lowell, in about 1800, inaugurated a movement for "model" housing for mill operators, with the result that several proprietors built what was good housing by the standards of their times—some are still to be seen in many old mill-towns of New England. The substantial brick row houses two and three stories in height, two rooms deep, built at Chicopee Falls nearly a hundred years ago have recently been rehabilitated through a loan insured by FHA. *See Plate II, p. 20.*[4] Since this early movement and up to the present time much industrial housing has been built in the north, south, east and west, varying in quality from poor to excellent and in size from a group of a score of houses to the bulk of the busy city of Flint, Michigan. But few of the families housed in such projects are those of very low income and the aggregate population housed in all of them is small compared to the population having no choice of anything but sub-standard housing.

Such was the general picture up to 1900. After 1900 cities generally began to be conscious of their slums, as a movement for better housing spread from New York over the nation. For the close-ups of the general picture we shall look at New York City, starting as a trading post of the Hudson's Bay Company and becoming the great trading center of the nation, from the start fast growing and congested.

## The Case History of New York City

### *The Early Years*

Why New York City? Bad housing appeared early in the life of New York, developed in its worse forms and early became the most extensive in this country. In most essential respects, despite the disparity in size, its history is typical of other cities and for that reason we may profitably review it. But also we may review it for the reason that, since slums there became acute earlier than in other cities, it was there that remedial legislation was first sought, and from there that such legislation spread throughout the

[3] "Slums and Housing," James Ford, Harvard University Press, Cambridge, 1936, p. 187.

[4] "Renting Housing as an Investment," Fed. Housing Administration, Washington, D. C., p. 21.

states. New York City and State are still well in the lead in research, in legislation and in achievement.

Nieuw Amsterdam was founded in 1626 as a trading post of the Dutch East India Company, centered about a small fort built for protection against the Indians. The first shelter was in cellars, with planks braced against the banks and a sloping timber and sod roof overhead—the same type later used for the first winter by the settlers of New Haven. In these shelters some families continued to live for several years—a bad start. As the permanent homes were built they were reasonably substantial in character and became more so as time went on; but the colonists early abandoned a good orderly town plan which they brought from Holland and, to meet immediate needs, laid out narrow streets in the easier locations. In his well-known "Knickerbocker's History of New York," Washington Irving describes how effectively this plan was carried out by the genial and sedentary city fathers: "In this manner did the profound council of New Amsterdam smoke, and doze, and ponder, from week to week, month to month, and year to year, in what manner they should construct their infant settlement; meanwhile the town took care of itself, and like a sturdy brat which is suffered to run about wild . . . increased so rapidly in strength and magnitude, that before the honest burgomasters had determined upon a plan, it was too late to put it into execution—whereupon they wisely abandoned the subject altogether." As time went on the lots between the narrow streets were all built upon. Soon over-crowding began—extending even into the damp cellars.[5]

By 1656 the trading post had become a village with nearly 120 homes. In 1664 the colony came under the English crown and in that year zoning against stills and tanning activities in residential areas was urged, but unsuccessfully. In 1674 an ordinance was passed to abolish the filth caused by herds of cattle and hogs running in the streets. About the turn of the century (1698), after seventy-two years of settlement by some thirty-six families, the colony had grown to a town of 4937 people, about 4 per cent of whom were negroes. Shortly after that, in 1702, five hundred were reported dead from small-pox. In the next twenty-five years there was a total increase of nearly 44 per cent, making a population of 7248. Importation of slaves had been begun and was encouraged generally. By 1746 the population was up to 11,718, with over 20 percent negroes, mostly slaves or servants. This indicated a growing prosperity. There was another small-pox epidemic in 1739. About that time one traveler reported that the city was more compact than Philadelphia, the streets narrow and irregular, though well paved; that the houses were from two to five stories high and many had "balconies" on the roofs where a view and a breeze could be had on warm summer days; that at a little distance from the town there was good spring water but there was none that was good in the town.

An order issued in 1761 required a more fire-resisting construction of buildings, yet in 1776 one-fourth of the city was destroyed by a fire, reported by one contemporary as starting in a small wooden house "occupied by men and women of bad character." The city by that time contained about 32,000 people and many handsome buildings. The burned area was rebuilt in a better manner than before.

Immigration from Ireland began about this time. The population was growing fast—by 1800 up to 60,515. In 1791 there was a yellow fever epidemic, which began in a "crowded district of small, ill-ventilated, unclean houses." There was another epidemic in 1795 and a criticism of conditions by one Doctor Seaman is of record: "low land, crowding, uncleanliness, cellar lodgings and narrow streets." There was a "bilious plague" from 1796 to '97 and one of yellow fever in 1798, which another contemporary writer tells us: "was not confined to the point of origin," but "in every other part of the city, favoring the accumulation of filth and stagnation of putrefactive materials, there it was no stranger." In other words, the fever started in bad housing and found out the bad housing wherever it was. Here is more specific contemporary comment on the housing: because of the "enormously high rents, many families, particularly among the Irish immigrants, were reduced to existing in damp cellars," and among these "the disorder was most prevalent and operated most powerfully." Father O'Brien: "Members of poor destitute families . . . in want of every necessity of life, confined in subterranean apartments which admitted no light, but from their hatch-doors. . .I was disgusted at the abominable, uncleanly state of their miserable habitations. . . not even a stool to sit on or a bed to lie upon."

### *An Early Beginning at Slum Clearance and Model Housing*

At the turn of the century following the Revolution, the city, with its population of about 60,000, had extended two miles north of the first houses, the installation of sewers and a pure water supply had been begun; there was street widening in the lower end of town and better planned streets in the north end. The price of land was rising, one piece of land bought in 1787 for $50, sold in 1807 for $1500, and with these high prices came increased overcrowding of the land. Legislation was brought forward in 1800 to prohibit the erection of buildings covering the entire lot, leaving no yard. In the same year there was legislation requiring that where such properties already existed they might be purchased by the city, the buildings demolished and the land put to whatever use the city

[5] Except as otherwise noted, many of the pertinent facts in this Chapter relating to New York City prior to 1860 are taken from 'Slums & Housing," by James Ford. The arrangement of the facts and the conclusions drawn from them are ours.

might find would best conduce to the health and welfare of said city—New York's *first legislation for slum clearance*, just fifteen years after the first Fourth of July! In 1804 taverns and rooming houses came in for regulations to prevent room over-crowding. In 1835 a large building at Christopher and Grove Streets was destroyed by fire; it had occupied the entire lot, without front or rear yard—in every way the foulest type of slum. Citizens petitioned and apparently the Council ordered, that the land be turned into a public square—apparently also New York's first *actual slum clearance*.

Up to this time the lowest rents available, other than in cellars, were in obsolete houses made over into apartments, with the original rooms subdivided, and with consequent loss of light. But even in such quarters rents were so high as to cause extreme room overcrowding. In 1833 there was built what appears to be the *first "tenement house"*—a house, for the occupation of several tenant families. Shortly after 1850 such buildings became prevalent and by 1860 they had multiplied to several hundred, with an average of sixty-five people per house. Some housed over a hundred people on lots 25 feet by 100 feet.

The establishment of regular trans-atlantic steamboat service from England to New York in 1840, as stated in the preceding chapter, cut the time of transit to 10 days; it boosted immigration from 68,000 to 226,527 between 1839 and 1848. Tenement houses were still being converted from old private houses, occupying the entire width of the lot so that the only windows were in the front and rear walls—converted into tenement houses with two to four apartments to the floor. To accomplish this, the extra bedrooms were located back in the interior and had their only light and ventilation through the front and rear rooms. From the original houses two rooms deep they were sub-divided or extended first to four, then to six and eight rooms deep—respectively eight, twelve, and sixteen rooms on each floor, only four of which had any outside light or ventilation. These became known as the *"railroad tenements."* *Plate III, A, B, p. 21.*

In this period, about 1850, there was built what appears to be the first highly specialized tenement building in the United States, Gotham Court. It was an improvement over the preceding types in that every room had some outside light, even though taken from narrow alley-like courts. But as a party wall ran lengthwise through the center of the buildings, there was no through draft. The common "water-closets" were under ground and lighted by gratings in the paved court. *See Plate III, F, p. 21.*

The location of these "water-closets" suggests that they may have been privies located directly over cesspools. The term "water-closet," as applied to an inside water-flushed sewer-connected fixture (a substitute for a privy), according to the Oxford Dictionary, dates back to 1755; yet Ford tells us they were not introduced into New York until 1842, and then only in the homes of the well-to-do. He mentions Workingmen's Homes (1855), described in the next paragraph, as the first tenement in which W.C.'s, were installed. Incidentally Ford also states that the first fixed bath tub in the United States was installed in 1842—in Cincinnati.

The next step forward toward better housing came when the Association for Improving the Conditions of the Poor, after two years study, in 1847 produced a plan for a *model tenement*, which was widely circulated, though none was built. Conceivably it might have given the cue for the plan of Gotham Court (built in 1850), but that is only our own speculation. In 1855 a branch organization of the Association was formed "for the erection of one or more model tenement houses for the laboring class, providing commodious and well-ventilated apartments at a price within the means of the poorer class, which should, *if practical, defray interest on outlay, repairs, insurance, and keep good the capital invested.*"[6] Here is the suggestion of a subsidy—in the desire, "if practical," to defray all expenses out of rent but if that were not possible rents should nevertheless be kept low. The plan was a big improvement over that of "Gotham Courts," *Plate III, F, p. 21.* There was a common gallery running the length of the building on the floors above the ground floor, with stairs at each end, and entrance to all apartments from the gallery.[7] It provided wider courts than Gotham Court, through drafts in each apartment and on each floor common toilets off the galleries; yet there were some bedrooms without direct daylight. It is important to note that only one such building was built. It was occupied by negroes.

Richard M. Hunt in 1869 built a high class apartment house which showed the way for a definite improvement in apartment planning for city lots, particularly as to light and air; but it had little or no influence on the prevailing plans of low-cost housing. Lots still were over-crowded at the expense of light and air.

The next outstanding event started low-cost urban housing on the right road, or at least showed the way. In Brooklyn, in 1876, Mr. Alfred T. White organized a company to build Improved Dwellings for the Laboring Classes, to be financed on the basis of a conservative investment, without either speculative returns or philanthropy. Aside from this innovation, he introduced a number of others, which set a type for later developments similarly financed, and established a land mark in American housing. For a full half century the buildings were profitably rented, largely to

[6] From the 13th Annual Rep't. of the Society, as quoted by I. N. Phelps Stokes, notes on Pl. 1A, in appendix to "Slums and Housing" —Ford, op. cit. The italics are ours.

[7] Such galleries had been used in England and continued to be built until recently, but are not now in favor for reasons noted in the chapter on Housing in England—*See Plates XIX & XX, pp. 69, 70.*

the laboring class for whom they were built. As a result of being a large group with open spaces large enough to produce neighborhood stability and of being kept in an excellent state of repairs, after fifty years of use they came into demand by white collar workers, paying higher rents, and this despite six stories and no elevators, no central supply of hot water and heat, no bath tubs (only basement showers). The first major transformation of the buildings came about sixty years after the first group was built, and consisted of modernizing the obsolete plumbing and heating facilities, introducing gas-fired incinerators at the foot of the trash chutes, and of transferring the entrances from the streets to the interior of the blocks.

At the outset Mr. White's company, ignoring the 25 feet by 100 feet lots, so convenient for turnover in speculation, built two buildings on a plot 100 feet by about 160 feet, at the S.E. corner of Hicks and Baltic Streets. The first building occupied the entire 100 feet front on Hicks Street, the other about the same length on Baltic Street, the two covering only 60 per cent of the land, leaving a generous open space between the buildings and the entire remainder of the plot in one large open space—planning precedent number 1. *Plate IV, A, p. 22.*

In each apartment there was a water closet, with an outside window (no bath tub or wash basin), a built-in laundry tub and an ash chute (innovations all), and a sink, all housed in an extension at the rear, opening off the living-room-kitchen. The first building was three rooms deep, but the second and all subsequent buildings were but two rooms deep—planning precedent number 2. Other precedents were: facilities for burning all refuse, individual coal bins in the cellar, a quarter of a ton coal box in each apartment with tackle for hoisting the coal, space for drying the laundry in the basement and on the roof—the beginning of community service. Another feature was the masonry outside stairway from the street level to a communicating iron balcony on each floor—highly desirable in a six story building, not only because of the fire-proof feature, but because the more extended view from each landing as one ascends gives zest to the ascent. This was similar to "model" plans being used in England[8] where, as we point out in the chapter on Housing in England, the housing movement was further advanced.

On the completion of these Mr. White built three more buildings across the street from the first, following the same general scheme, but this time covering but 50 per cent of the land. This and the first group are known as Tower and Homes Apartments. To the east of the second group, the company built a group of two-story cottages, in two parallel rows, with three stories of flats at each end of each row—covering about 51.6 per cent of the land. Population in three groups was 312 families, which, with control of both sides of the street and the open type of planning, resulted in a neighborhood adequate to hold its own. In about 1884 the same company built the nearby Riverside Apartments on a larger single plot of land, 200 by 300 feet, using the same general house plan, with a coverage of but 50 per cent, and housing about 318 families. *Plate IV, D. p. 22.* These were remodelled in the same manner as Tower and Homes and at the same time (1935–42). This 50 years of use of Riverside Apartments before obsolescence required that they be remodelled and the 60 years use of Tower and Homes may throw some light on what may be expected of well-planned dwellings built today.[8a] But obsolescence is a comparative term and it seems probable that the advance in standards of large scale public housing, introduced about this time had its effect on the timing of the obsolescence of the White properties.

*The Era of Speculative Tenements*

Meantime the speculative building of tenements had speeded up. The only hope for large profits on tenement properties, built on high price land near the center of the city, seemed to be in crowding the maximum number of rooms on each lot, and ingenuity pushed in that direction. This is well illustrated by a competition held in 1879 for a "model" tenement house plan for a typical lot 25 feet by 100 feet. The program stated that "Capitalists will not invest in this direction unless they can obtain at least 7 per cent interest" and competitors were urged to "strive to plan a sanitary building which will bring in the most revenue." The prize winning drawings so crowded the land with rentable rooms that adequate air, light and a decent degree of privacy was impossible; yet in the following year 399 buildings were built from this design, and for decades after, thousands more. *Plate III C, p. 21.* They became known as "dumbbell apartments" and "double deckers." They were a major contribution to New York's worst housing. There were better plans presented in the competition (*Plate III D, p. 21*) but they did not "bring in the most revenue." That is the traditional attitude of private capital toward housing for families of low income; it is not good housing which has been the *sine qua non*, but good returns. Good low-rent housing of decent standards were not produced in any appreciable quantity by private capital.

Following the competition which produced the "dumbbell" plan, George W. Dresser, C.E., made a proposal which was about two generations ahead of his time. On an entire city block he planned for a large number of small detached four-story buildings, with four one-family units to the floor, each building

[8] James Ford, in "Slums and Housing," p. 680, specifies the plan of the tenements financed by George F. Peabody, American philanthropist.

[8a] A chart of Income, General Expenses, Depreciation, and Net Profit on the Riverside Apartments is found in the Architectural Forum for November 1939. An account of the changing type of tenants since 1878 appeared in the N. Y. Times Real Estate Section, January 18, 1942, by Mary O. Whitten.

42.5 x 55 feet, each apartment with corner exposure. They were spaced 10 feet from the building to the north and south and 20 feet from the buildings east and west, with a land coverage of about 63 per cent. The buildings, designed by George B. Post, show a spacious central stairway and hall, off of which on each floor was a group of toilets, one for each family. Central community facilities and supervising were planned, neighborhood privacy and cohesion to be maintained by an enclosing fence. They were to rent for not over $8 a month, and were to produce "the legal rate of interest." None were built. *Plate IV, B, p. 22.*

*Various Movements for Improvement*

In this period came the Settlement House movement, to show a way to better living. Slums were increasing after their traditional kind. The few efforts of private enterprise, even when backed by philanthropy, made little impression. In England the experience had been the same, though longer. There Octavia Hill, by living in the slums and operating sub-standard properties on a humane basis, had succeeded in bringing about a better way of living for some of those destined to pass their lives in run-down housing. In New York a similar work was inaugurated by the Ascension Church in 1865.[9] In 1886 the University Settlement was established, from which Jacob Riis later crusaded for better housing.[9a] Neither these settlements nor all their successors had been able to reach and impress the great mass of slum dwellers, yet the idea of a reform persisted. In 1874 there appeared "The Dwelling Reform Association," which emphasized the "normal distribution of population in town and country"—*a move toward decentralization*, years ahead of Ebenezer Howard's larger and more specific suggestion in England.

The first housing reforms through legislation were urged in New York as far back as 1856. They did not attempt to get rid of buildings already built, but to set limitations on overcrowding in existing buildings and to require a certain minimum of light and air and of sanitary conveniences in *new* buildings,—but there was caution not to make the changes too drastic. Yet, even in the face of the deplorable situation we have described, it was decades before this first legislative attempt was actually attained. True, the first tenement house law was passed in 1867, but it was wholly inadequate—did not exact enough and consequently effected no change. The realization of what was considered an adequate law did not come until 1901, as we shall see presently.

Meantime, in 1879–80, there was another attack against the small lot as the unit of building. The Improved Dwelling Association, of which Mr. A. T. White became a member, built a large "model" tenement arranged around a large open court, at First Avenue and 71st and 72nd Streets, where the land was one-fifth the value of the buildings, instead of over one-half as in down-town sections. The plan of the units on First Avenue bear a strong resemblance to those of Tower and Homes. *Plate IV. C, p. 22.* The unit on 71st and 72nd Streets, by developing a secondary interior court made a much more intensive use of the land than at Tower and Homes. This marks another step in the direction of increasing the land coverage, but without extreme sacrifice of light and air.

Obviously the lower the cost of housing, the lower need be the rent charged, and lower the incomes of the group which can rent them. So, with the price of land steadily increasing, the architects designing "model" tenements strove for the highest land coverage consistent with adequate light and air. So also they strove to enclose their buildings with the minimum total length of outside walls. This is illustrated by buildings which the City and Suburban Homes Co. (operating on modest investment returns) built in 1898 on West 68th and 69th Streets, from prize winning competitive plans. *Plate IV. E, p. 22.* The coverage was 63 percent (to be compared with 50 percent in the Riverside Apartments), and the extent of enclosing wall was reduced by arranging the apartments around the four sides of alternate open and larger interior courts. The same scheme of unit plans was used in another group built at First Avenue at 64th and 65th Streets, for the same company. *Plate IV. F.*

Enclosed courts had quite a vogue for about a decade. But they tend to be noisy and are less airy than open courts; so when Phipps Tenement House Number One was built on East 31st Street in 1906, we find courts that open up to the street, for part of their width and the greater part of their height. The gain was worth the extra cost of the additional enclosing walls. The coverage was about the same as for the enclosed court type sites. *Plate IV. G, p. 22.* To afford the tenants better access to sunlight and air there was a roof garden. This feature has to some extent persisted, but it involves an increase in first cost and in maintenance cost, which coupled with the objection by some that the noise of coming and going to the roof, has been a hindrance to a more general use.

*From the Turn of the Century to World War I*

From the turn of the century up to our entry into World War I, there were over a score of "model" tenements built, varying in size from over 100 rooms to over 3000 rooms, with a total of over 14,400 rooms.[10] This was a valuable contribution to research in the planning of low-cost housing, and to the improved

[9] The Ascension Association—Ford, op. cit., p. 161–162—p. 167.

[9a] His "How the Other Half Lives," appearing in 1890, awakened the public to the tragedy and menace of the slums, and brought about the razing of Mulberry Bend, one of the worst of slum blocks, and the development of the little park which now occupies the site.

[10] Detailed figures will be found in The Report of the Tenement House Commission, 1915–1916, quoted in "Slums & Housing," op. cit., p. 903.

living of over 5000 families. But it reached only a small part of the slum population, roughly about 1 percent, and that a somewhat selected group. It is encouraging, however, to note that several of the investors have continued their operations, notably the City and Suburban Company and the Phipps Estates, and that after World War I others came into the field.

The New York Tenement Law, which had been passed in 1901, accepted the fact that tenements were commonly built for investment, and on small plots of land; that the investor (or speculator) was not as a rule concerned with the quality of the living conditions, but sought to produce as much rentable space as possible on each lot. The law was essentially a series of limitations to prevent the building of new tenements below certain standards, and though in intent it did encourage the use of 50 foot lots, it offered no positive encouragement for large scale planning about large open spaces. There was some provision for requiring the maintenance of existing tenements in safe and sanitary condition, and even the demolition of buildings unfit for habitation, but the enforcement was not effective. It did, however, stop the building of more "dumbbell" and "railroad" tenements; but the vast majority of these unwholesome dwellings were and still are in use—for lack of enough better buildings.[11] It is in them that a large portion of the city's population lives.

*The Movement for Better Housing Becomes National*

As the chief author of the "New York Tenement House Act of 1901," and the first executive secretary of the Tenement Housing Commission appointed under its authority, Mr. Lawrence Veillier was the outstanding national figure in the movement for better housing. "A Model Tenement Law" (1914 and 1920) of which he was co-author with Henry deForest, proposed to broaden the scope of the law to include single family residences. Everywhere this model served as the accepted basis of American housing legislation. As the Executive Secretary of the National Housing Association, and editor of their "Housing Betterment," a quarterly succeeded by "Housing," Mr. Veillier kept readers posted as to the best in housing in all countries. The National Housing Conference was organized and sponsored by the Association in 1910. It held annual meetings in various parts of the country until the federal government became active in housing. "Housing Problems in America" was the report of its annual conference and affords a good record of American housing in this period. The highly organized movement succeeded in making at least some portion of the population of most of our cities conscious of their bad housing, brought about housing legislation in many states and started the concerted demand for better housing of which we today are reaping the results. The procedure then followed in each community, and still followed, was: (a) by photographs and statistics to give publicity to the fact that slums exist; (b) to organize a supporting group and obtain state legislation authorizing the interested cities to enact a housing ordnance and then to establish an organization to carry it into effect; (c) to endeavor to bring about the erection in the community of one or more model limited dividend housing projects. In the 1930 Edition of "A Model Housing Law" (p. 337), Mr. Veillier endorses the British practice of making tenements and all low-cost dwellings only two rooms deep and called attention to the fact that in "Standards for Permanent Construction," the U. S. Department of Labor in 1918 had included a change which would require the two-room depth standard—stating the advantages.

Despite the fact that governmental subsidies had been adopted in Holland in 1901 and had come to be considered necessary in England, housing reform in the United States during the period from 1901 to the recent inauguration of public housing in 1933, was based on preventive measures applying to new private enterprise and to a sanitary maintenance of existing housing; a notable exception being the New York State Legislative Act of 1926, encouraging limited dividend housing corporations. Mr. Veillier, a lawyer by training, and as we have seen pioneer and for many years spokesman in the national movement for housing reform, as late as 1914 was still convinced that preventive legislation was the first and fundamental step to better housing. "That legislation alone will solve the housing problem is absurd. . . .We must get rid of slums *before* we establish garden cities; we must stop people living in cellars *before* we concern ourselves with changes in methods of taxation; we must make it impossible for builders to build dark rooms in new houses *before* we urge government to subsidize building; we must abolish privy vaults *before* we build model tenements. (Italics are ours.) When these things have been done there is no question that effort can be profitably expended in the other directions mentioned."[12] "How delightful it would be to be able to believe. . .that given enough wages slums would vanish. . . .But alas, it is not to be done so easily."[12a]

At the turn of the century, in addition to the advance in housing legislation, an interest in city planning was coming to the fore, including an interest in the English system of planning garden suburbs. Brookline (Boston), Roland Park (Baltimore) were such suburbs, and the number was growing fast, but

[11] Report of the State Superintendent of Housing, Edward Weinfeld, Albany, 1940.

[12] "A Model Housing Law." Lawrence Veillier, New York, Survey Ass'n., Inc., 1914, p. 7.

[12a] Ibid., p. 3. Noting the achievement by the British Government in post-war housing, Mr. Veillier advocated control of housing by some federal bureau, which might exercise eminent domain (as was done in our own war housing) but he reiterated his opposition to "government housing or publicity-aided housing." Architectural Record, Dec. 1920, p. 534.

for the prosperous only. A course in city planning was inaugurated at Harvard. Forest Hills Gardens, L. I. (New York City) came a decade later. Abundantly financed by the Russell Sage Foundation, it was originally conceived for modest-salaried white-collar workers, but as developed it was for a definitely prosperous class. The admirable plan and harmonious architecture under Olmstead Brothers and Grosvenor Atterbury was a stimulus to planners throughout the country. For an income below that of Forest Hills, about this same time, the Queensboro Corporation at Jackson Heights, L. I., under the direction of E. A. McDougall, with the aid of A. J. Thomas and other architects, began building garden apartments, some cooperative, on land purchased as farm land beyond the public transportation lines. With the coming of such transportation, activities increased, until there came to be 100 blocks of apartments facing on interior gardens. *See Plate VI, G, p. 24.* This was the forerunner of the later development by blocks in the closer-in areas of the city—to be discussed later. The advance of planning was checked by fantastic ideas advanced with the "city beautiful" movement (a corruption of the idea of orderly and open city development which grew out of the Chicago World's Fair of 1893); but the movement was offset to some extent by the sober deliberations and publicity of the National City Planning Conference. This organization early stressed the general need of city planning and garden suburbs and the idea of the super-block for residential housing in the more open urban areas. Thus when World War I suddenly demanded war housing, there was an adequately large group of men trained in large scale land planning, beside a considerable group who were aware of the menace of slums and had technical knowledge of low-cost housing and large-scale planning.

*Enter the Government; War Housing of 1916–1918*

World War I brought the United States Government dramatically and for the first time into the field of housing on a large scale. Before that, Government housing was limited to army posts, federal prisons, and like. Even before the United States entered the war, huge orders from the warring countries for the manufactured essentials of war shifted large numbers to the centers where these essentials were produced. The consequent demand for housing brought about serious over-crowding, despite a certain amount of new housing built by private enterprise to meet the demand. Probably had it been felt that the shift of population was permanent, the amount of this housing would have been greater. When, however, the United States entered the war, the concentration of population in the producing areas was increased by tens of thousands and they had to be housed.

Permanent housing was built by two emergency federal agencies, the Emergency Fleet Corporation, and the Council of National Defense. The former worked through a separate local housing corporation for each project, operating with federal loans. The other, which operated through the U. S. Housing Corporation, adopted a policy of direct government construction, and in so doing it was prompted by expediency, by haste, rather than by the better judgment of its officers.[13] Actually the procedure through local corporations brought best results. Those drafted into both these organizations were the best and most experienced talent to be found in the profession of architecture, city planning, landscape architecture, engineering and constructing. Permanent construction as the usual practice, was the policy adopted. High standards for planning were determined upon for materials, lighting, ventilation, heating, sanitation and fire prevention.[14] Some of the projects, where proximity to work made it desirable, were in densely built-up sections of the city, as the Black Rock project in Bridgeport; but for the most part they consisted of new garden suburbs or villages on a large scale and in accordance with the most approved practice. *Plate V, p. 23.* Thus were some of the principles of English garden suburbs and garden villages transplanted into more of our communities; and, translated into our own idioms, they have become an essential tool in our subsequent large-scale housing projects.

The Emergency Fleet Corporation, through local housing corporations, built nine thousand homes in twenty-seven towns, on land provided by the ship building companies. When the Armistice stopped operations, the U. S. Housing Corporation, operating from Washington, had completed plans for twenty-five thousand families and twenty-five thousand single laborers, and had built projects costing forty-five million dollars in which six thousand families were already established—against the nine thousand of the Fleet Corporation. The results set a new standard for American low-cost Housing, and thus the precedent for certain of the procedures of government in the peace time housing to come in later years.

*The Post-War Housing Impetus, 1918–1933*

Although the foregoing events were national in their scope, the struggle of developing better housing for the urban slum dwellers still was most active in New York. Here the pioneering zoning law of 1916, by regulating the height and masses of new buildings, presumably had its effect on the subsequent type of tenement buildings. At least it called to the attention of the general public the importance of light and air, and set people to thinking in broader civic terms. As zoning spread over the nation, so also there spread a broader approach to the housing problem.

[13] "War Emergency Construction & Housing War Workers," Vol. I. James Ford, ed., p. 20 et seq.

[14] These are recorded in the Report of the United States Housing Corporation, Vol. II, Houses, Site-Planning and Utilities, Henry V. Hubbard, and others. Standards Recommended—p. 505–509. Government Printing Office, Washington, D. C.

The various types of large-scale planning which the war itself entailed, especially the large-scale war housing, and large-scale planning of the reconstruction of the vast devasted areas of northern France and Belgium, to which many people of the United States gave financial aid, all these things tended to make people look for large solutions for their civic problems. In many metropolitan areas of the nation, civic and political groups were scrutinizing their local situations. Thus in 1919 the Reconstruction Committee of the State of New York had prepared studies for "an improved development of five-story tenements." The plan, by Mr. A. J. Thomas, shows a series of U-shaped buildings on the perimeter of the block, with a large central open space for the great part of the length of the block and with the apartment entrances on the secondary interior courts. *See Plate VI, A, p. 24.* For the Suburban Homes Company, Mr. Thomas built buildings covering part of a block on Seventeenth Avenue in Brooklyn, using the same type of buildings. The same general scheme was followed on two large projects in later years—The Metropolitan Life Insurance Company's Sunnyside Apartments, and the Academy Apartments in the Bronx, referred to later and shown in Plate VI.

Thus again, in 1920, through the Joint Legislative Committee on Housing and Reconstruction Commission of the State of New York, the State stepped into the city to establish a competition of "ideas" for reconstruction of a typical city block—"without entire destruction of the buildings." While emphasis was placed on the prevailing lack of air, light and sanitary facilities, attention was drawn to the broader needs of recreation facilities and the ordinary comforts and amenities of a home. A specific block was surveyed as to the buildings, and population. No scheme suggested in the competition was carried out, but the competition put the spotlight on the necessity of "drastic social and economic changes. . . and the need of a different type of city." Again people were set to thinking.

Future trends were foreshadowed by one competitor, who emphasized the broader aspects of the program, rather than the salvaging of existing buildings. He urged considering the problem in its city-wide aspects; the effect of the present street pattern on all north and south bound traffic, which in Manhattan moves through avenues commonly 800 feet apart; consideration of the excessive costs of slum areas to many city departments (notably those of Police, Fire, Health and Sanitation), the excessive costs of private insurance and the poor tax returns. Specific proposals were: (a) clearing the land of all existing buildings or parts of them excepting those bordering on the streets to a depth of two rooms, and to these adding relatively shallow extensions arranged about spacious open courts, thus leaving a large free space in the interior of the block (*Plate VI, B, p. 24*); (b) taking out of the existing streets the normal slow flowing neighborhood traffic and the occasional traffic of the even more congesting services of collecting garbage and trash, of local fire control service, of police and hospital ambulances. and diverting this local traffic into the interior of the block, through secondary north and south streets and service roads.

As to buildings, this competitor proposed that all new tenements be built with solid reinforced concrete floors with a finish involving no air space and solid plaster partitions (as a means of vermin control) and that, being thus fireproofed, all fire escapes be omitted; that the concrete floor be extended to form balconies; that to increase room space without extra cost, story heights be reduced from nine to eight feet; that the cubic contents of all rooms be a multiple of 400, that being roughly the amount of air needed by each person; that indirect radiation be required in each room, so that fresh air might be had without drafts and even when windows were closed; that each room be planned for a clean-cut specific use, including clearing the "living-room" of all utilities and assembling them in a compact kitchenette; that all bedrooms and the bathroom be arranged about a common hall, with one bedroom large enough for a parent and child. While it was over a decade before any large portion of these ideas came to be generally accepted, they indicate the goals toward which some planners were striving. The planner in the case just cited was the present author.

A landmark in the growing interest in the larger aspects of civic planning was the organization in 1922 of the Regional Survey of New York and Its Environs, financed by the Russell Sage Foundation. An able staff of specialists, under the leadership of Thomas Adams, eminent British town and regional planner, for nearly a decade studied the physical, economic and social features of all the area within forty miles of a center in lower Manhattan, and some of the area within fifty miles. The report was in the form of monographs, which, with the maps, etc. filled ten large volumes.[15] This work stimulated thinking in regional terms and invited the attention of builders of houses to the outlying areas. The increase in the number of private automobiles and of busses, the extension of elevated and subway lines, of bridges and tunnels to Long Island and to New Jersey all facilitated access to the cheaper outlying land, available for housing the low-income white collar workers and some skilled mechanics. Similar regional surveys were made in a number of cities. Slum surveys were made in even greater number.

[15] Volume VII includes the monograph on the "Neighborhood Unit" by Clarence Arthur Perry. New York, 1929. The work of the Regional Survey was continued by the Regional Plan Association, organized in 1929, issuing reports in 1933, 1938 and 1942, which show both the material achievement of the original plan and revisions and extensions responsive to changing conditions.

One suburban project, such as suggested by the Survey, was that built for a population of 9000 by Metropolitan Life in 1924 at Long Island City—fifteen minutes by subway from Grand Central. On each long side of a lot 600 by 200 feet is a row of six U-shaped six-story buildings, leaving between the two rows a continuous open space. While the land coverage of 52.6 percent was a marked advance over the Phipps Model Tenements in Manhattan (with a coverage of 63.6 percent) the open space gained was not in areas of such size as to be satisfactory either for gardens or recreation. With the top rents at $9 per room[16] and partial tax exemption, a yield of 8 per cent was anticipated. Families having incomes over $4000 were deemed ineligible; tenants were mostly clerical with some skilled mechanics.[17]

Another landmark was the State law of 1926 establishing a State Board of Housing, under whose supervision, housing corporations with dividends limited to 6 per cent, by complying with the standards and requirements of the Board, could enjoy partial tax exemptions for as long as twenty years at the option of the municipality. Rents were not to exceed $12.50 per room, per month, in Manhattan, $11 in other parts of New York City, and $9 in smaller communities. The aim was to stimulate private enterprise to supply housing for that limited group of slum dwellers who could afford to pay that much rent. But the stimulus was not adequate. As the law was enacted it included no provision for state loans or other state aids. Of the score or more of large projects built, availing themselves of the advantages offered before federal agencies offered further stimulus, most catered to the maximum allowable rents. A number of them were definite contributions either to planning, to financing, or to management.

At Long Island City, Sunnyside Gardens was started in 1926 by the City Housing Corporation, with rents within the $11 legal limits of the new state law. It differed from previous "model" projects for New York's low-income group in its greater extent (70 acres including some ten blocks), which was developed with two-story row houses and three-story apartments, any of which could be purchased on a monthly installment basis—the apartments could be acquired after purchasing stock in the Co-operative Association and on paying $52 a month for four rooms, $62 for five rooms.[18] All buildings are grouped around a central open space, used for gardens and supervised playgrounds for the smaller children. *Plate VI, C, p. 24.* Sports areas for the noisier older groups are provided off the residential blocks, as are the garage compounds. Although no special rooms were provided for indoor community activities, such activities nevertheless became well developed. Unfortunately a pre-determined gridiron street pattern prevented the breadth and variety of planning which our best war housing brought from England.[19]

The Amalgamated Clothing Workers Union built two large co-operative projects, the first, known as Amalgamated Housing, in the Bronx in 1926, the second known as Amalgamated Dwellings in East Grand Street in 1930. *Plate VI, F, p. 24.* Both were for tenant-owners from the same lower East-side neighborhood, but not limited to their Union members. In the Bronx only 30 percent were members. The tenant-owners included a fair percentage of professional and small business men. The purchase price was $500 a room, of which, in the Grand Street Dwellings, $150 was paid down and the balance of $350 in ten years, with interest at 5 per cent.

In each project is a large auditorium for socials, a library with a librarian in attendance in the afternoon and evening, a social worker in charge of adolescent children (at a cost of 50 cents a week for each family). There was a co-operative commissary where all foods could be had. The laundrying for the entire population is done at wholesale, so that each family pays no more than they formerly paid for soap and soda.[20] The Bronx buildings are of five-story walk-ups, and have a coverage of 51.3 percent; the Grand Street buildings are of six stories with push-button elevators, and have a coverage of 59.4 percent, the roof being used for recreation. The maximum allowable rents in the Bronx are $11, in Grand Street $12.50—which is a good example of the difference between building on relatively cheap and on costly land.

A desire for home ownership among some of the negroes of Harlem was met in 1930 by the Paul Laurence Dunbar Apartments, financed by John Rockefeller. By making down payment of $50 per room and monthly payments averaging $14.50 per room, tenants could become full owners in 22 years. As reported in 1931, the largest group of tenants were in clerical and semi-clerical positions (many in the Post Office employ), the next largest group were chauffeurs, stewards, cooks, Pullman porters, etc.; then a small group of teachers and dress makers, who as a group had median monthly earnings of about $149.00. Although the buildings are but two rooms deep, so that all apartments have windows on two frontages, the land coverage is but 49.7 percent and there is a large central open space for gardens and small playgrounds. Various facilities for community life are

[16] A State law passed in 1922 permitted life insurance companies to build and operate apartments renting for not over $9 per room.

[17] "Comfortable Homes in New York at $9 a Month"—Metropolitan Life Ins. Co., circ., 1926. p. 10–11.

[18] "Sunnyside," City Housing Corporation, 587 Fifth Avenue, New York, circ. 1926.

[19] An analysis of the planning problem will be found on p. 38 of "Rehousing Urban America," by Henry Wright, who collaborated in the planning with Clarence F. Stein and Frederick Ackerman.

[20] "Slums, Large Scale Housing and Decentralization, Vol. III." The President's Conference on Home Building and Home Ownership. Washington, D. C. 1932, pp. 129–136.

provided for, notably a day nursery. *See Plate VI, D, p. 24.*

The one project which undertook to reach down into a lower income group, lower than the upper limit of the State Law, was that of the Lavanburg Foundation, in Goerk Street, whose tenants were largely those of the old tenements which were demolished. This was made possible by Mr. Lavanburg's endowment and a policy of operating at cost, after charging off maintenance and depreciation. In 1938 the average rents were about $7 per room, which without tax-exemption would run to about $8. Like all the other projects we have been describing, the buildings were but two rooms deep, but the rooms were relatively narrow and deep. The open light courts, however, are adequate for light, though not for playgrounds, which might have been possible on a larger lot—this one is about 100 by 225 feet. There are separate rooms for the supervised indoor recreation of boys and girls, a first-aid room with attendant nurse, but no day nursery.[21] This housing was avowedly a social experiment.

The Mesa Verde Apartments, built at Jackson Heights, L. I. in 1926 for a white-collar group were an early forerunner of a later trend toward more open planning in smaller separate building units, instead of in continuous or closely spaced buildings about the perimeter of the lot. *Plate VI, G, p. 24.* Aside from the ingenious arrangement of plan, there was an ingenious elevator service—one central elevator to the roof in alternate buildings, all roofs connected by "hurricane bridges", passengers descending from roof to upper floors. This may be the precedent for the later system of elevators stopping at alternate floors only—at a considerable economy in service, compared with the all-stop system.

This trend toward more open planning was followed by the Academy Corporation (limited dividend) in their large group in the Bronx (1930). *Plate VI, E, p. 24.* Here by means of a compact house plan, characterized by a large proportion of corner apartments, land coverage was reduced to a new low of 43.9, with the open spaces strategically located for air and light. Of playgrounds there were none, for even in the larger block developments, they had come into disfavor, because of the noise of the older children when at play. Rents were as low as $10. This and the Lavanburg project throw light on the extent to which profits and taxes affect rent.

In the hope of permitting greater elasticity in the design of tenements, of preventing their being crowded in and overshadowed by tall buildings, of improving the standards of existing tenements, and of other gains, the Multiple Dwelling Act of 1929 was proposed. But in the passing, many of the best features were deleted and soon it was encumbered with complicating amendments. Administration by the Building Department, in place of the Tenement House Department, was not a step forward.

*The Impetus of Federal Aid to Low-Cost Housing*

The next landmark is both national and local—*federal* interest in low-cost housing. First came the research and recommendations under the Hoover administration, then action under the Roosevelt administration. The latter administration early set up, in rather quick succession, several agencies for clearing the slums and replacing the old houses with new ones. This work required the organization of local housing authorities, with power of eminent domain, to be granted by the state. Pursuant to this need the New York Housing Authority was established in 1934. Other authorities were set up throughout the nation. The story of the various national agencies we take up in later chapters. *See especially Appendix A.*

Thus the New York City Authority was established to enable the city to avail itself of the federal aids to slum clearance and low-cost housing. Some years later, however, when funds available from federal sources were temporarily exhausted, the Authority continued its program with funds made available from the State through the Public Housing Law of 1939, and through the sale of their bonds to the public, rather than to the USHA, at interest rates far below the statutory rate required by USHA.[22] No other state has as yet made funds available for municipal housing, nor have other cities permanently financed any of their subsidized housing without the aid of the federal government. The procedure elsewhere in the nation has been for the housing authorities to avail themselves of the federal financial aid and to supplement their working capital by the public sale of bonds, mostly short term bonds for immediate needs.

The federal aid to slum clearance and the construction of low cost housing, initiated in 1933 and continued through the various agencies described in detail in subsequent chapters and in Appendix A, early extended the idea of the superblock as the area for planning. This was made possible through federal participation, which eventually brought with it the right of eminent domain, making feasible, through condemnation of private property, the prompt assemblage of large tracts of land at reasonable prices. PWA, the first agency offering substantial subsidies, stipulated a much lower land coverage than had previously prevailed. This made possible combining with greater freedom and ingenuity the various types of building units previously developed—the straight strip, the L, the T, the X (cross), the V, and the Z—of which more later.

[21] "Diary of a Housing Manager." Abraham Goldfeld, NAHO, Chicago, 1938. pp. 1–3. Mr. Goldfeld has been manager from the start.

[22] The Eighth Annual Report of the New York City Housing Authority, 122 E. 42nd St., gives the details on pages 7 and 8.

The first project receiving federal aid was Knickerbocker Village, 1933, financed with a ten year loan from the Reconstruction Finance Corporation. Three of the worst slum blocks were cleared, including the two notorious "lung blocks," in which 40 percent of the population had some form of lung trouble. For reasons which are given in appendix A (p. 227) rents were too high for all but a small percentage of the families formerly on the site, and 82 per cent of them were forced back into "dumbbell" and "railroad" tenements in other areas.[23] The new 12-story buildings were solidly built on the perimeter of two large blocks, with the result that the long shadows of the building brought early twilight and late dawn to the lower stories of these buildings and to the surrounding lower building. As slum replacement it was far from satisfactory. *See Plate XL, A, p. 170.*

On a large tract of land in a relatively open area of the Bronx, Nathan Straus, later USHA Administrator, in 1934 built Hillside Homes, utilizing the partial tax exemption under the State law and the 30 percent grant from the newly established PWA Housing Division, available to limited dividend projects. The street pattern had been previously laid down, and probably because of lack of eminent domain, was adhered to in part. So the building units are of the same type which the architect, Clarence Stein, had worked out for a number of apartments built within the limitations of city blocks, notably the Phipps Garden Apartments at Sunnyside. The buildings are four stories high, except for one which is six with elevator serving the higher stories—covering only 38 percent of the land. But because the old street pattern was not wholly adhered to, it was possible to arrange a large central playground accessible to most of the tenants without crossing a street.[23a] *Plate VII, A, p. 25.*

A New York example of federally subsidized housing, built under the regime of PWA's Emergency Housing Corporation (described in Appendix A) is Harlem Housing, on relatively open land at 151 St. and the Bronx River. A broad avenue cuts the area into two triangles. *Plate VII, D, p. 25.* But by dint of exceptionally good planning, in each triangle there was reserved a large recreational area, about which the buildings are well grouped for light and air, with a coverage of 51 percent. Extreme architectural simplicity is given dignity and beauty by windows well disposed in walls of common brick carefully chosen for color. The monotony all too common in large scale plans is avoided by breaks in the skyline, which result naturally from the irregular plan and from occasional variations in building height, all skillfully handled. *Plate VIII, D, p. 26.* Through subsidies, rents ranged from $6 to $10 a room, averaging $8.43 in 1941.

Williamsburg affords another example of the PWA Housing Corporation's subsidized housing. Here twelve large city blocks were developed into four superblocks, one of which is occupied largely by a public school and playgrounds. *Plate VII, F, p. 25.* The four story buildings are arranged with the longer elements in the most favorable positions in relation to sunshine. Corner windows increase the wall space available for furniture and have some of the advantages of bow windows. *Plate VII, F, and VIII, E, pp. 25, 26.* The coverage is 33 percent.

Queensbridge, an early example of USHA aided projects, is developed in six superblocks, even larger than those at Williamsburg, and has a population of over 11,000. Since it had to rehouse an equivalent number of families in the demolished slum buildings (off-site in this instance), it was necessary to build six-story elevator buildings. Because tall buildings cast long shadows, it was necessary to leave wider open spaces between buildings, resulting in a 25 percent coverage. To reduce shadows, a plan was adopted in which the building units meet at an obtuse angle, resulting in the Y shape units. *Plate X, A, p. 41.* Another ingenious device is offsetting certain of the Y's where they join, so as to form corner rooms, thereby attaining a through draft. In the two central superblocks, the typical plan is modified to provide space for a community center and auditorium, for a day nursery and shopping center.

*The Present Day Problem in New York*

There is on the small island of Manhattan the familiar concentration of skyscraping office buildings, hotels and department stores, which is common also to rail centers and seaport cities in other parts of the nation—wherever large numbers are employed at relatively low wages; but in addition there is, in the heart of the island, a huge industry in wearing apparel, from underwear to furs. The lack of easy and cheap transportation during the period when these industries were developing caused a vast population to crowd within easy reach of the various places of employment, largely in the "railroad" and "dumbbell" tenements built from over forty to over sixty years ago, relatively few of which have been demolished—despite the fact that as far back as 1886 some of them were condemned as unfit to live in.[24] Straus says about two million people now live in these old-law tenements.[24a] Meanwhile, new tenements have not been built in quantity approaching the need of the increased population. The job of the Housing Authority is to rid the city of

[23] "What happened to 336 Families who were compelled to Vacate Their Slum Dwellings to Make Way for a Large Housing Project." A study directed by Abraham Goldfeld and Lillian D. Robbins, for the Lavanburg Foundations in 1933.

[23a] Community Service—A Review of Eight Years of Community Life at Hillside Homes" Bronx, N. Y., 1943, deals with social aspects.

[24] "Slums, Large Scale Housing and Decentralization," op. cit., p. 129, and Report of the State Superintendent of Housing, 1941, op. cit., p. 7.

[24a] "Seven Myths of Housing," by Nathan Straus, Alfred A. Knopf, New York, 1944, p. 79..

the obsolete and unwholesome buildings and to house their occupants in wholesome dwellings within easy access of their work.

It is in consideration of the foregoing conditions that the Housing Authority has pursued a policy of slum clearance and the placing of the new buildings on the old site. From 6 stories they have progressed to 8, 10, 12, and 13, sometimes combining buildings of several heights in the same project. The latest are the tallest. The population of most of them varies for the most part from about 2,000 to 13,000, the latter in the Fort Greene Project; the land coverage varies from 13 to 29 percent. *Plate XV, A, p. 46.* In outlying areas are two relatively small projects (from 1364 to 1684 people), two of 2-story buildings, one of 3 and 4 stories.[25] The extreme heights may seem unwarranted, particularly in the light of Sir Raymond Unwin's observations, (presented in the Chapter on Land Values, p. 192); but in judging of the solution we must bear in mind the peculiar local factors which we have outlined, and the fact that many luxurious apartments exceed these heights and with greater coverage. The interior dining alcoves seem to us a questionable economy. *Plate XV, B, p. 46.* In any case balconies would mitigate some of the most serious disadvantages, as might also small laundries distributed on alternate floors, somewhat after the manner of the latest London Housing (*See p. 64*), or the adoption of such unit plans as we suggest in the chapter on Design, pp. 212, 221. The policy can be judged only in the light of a detailed knowledge of the conditions outlined in the foregoing paragraph, and as part of the problem of balancing the advantages of decentralization against the necessity for some form of reclamation of the blighted areas. *See section on the Rehabilitation of Cities, p. 149.*

New York's major housing problem obviously is to make up the shortage of decent housing for that great body of the population living in the slums. "Private Construction has supplied no new accommodations for low income groups for more than 30 years."[26] In the seventeen year period from 1918 to 1935 (prior to slum clearance) there had been demolished over 55,000 buildings unfit for habitation. Swan states that in the ten year period from 1931 to 1941, covering the period of slum clearance under the Housing Authority, there were 62,342 family units demolished—out of a total of 528,001 old-law units in existence. But he also states that a much larger number of buildings are demolished to make way for large-scale miscellaneous public improvements than to supplant physically depreciated structures.[26a]

[25] In the Eighth Annual Report of the Housing Authority, op. cit., is a list of the projects with statistics, p. 22–23.

[26] Report of the State Superintendent of Housing, Edward Weinfeld, Albany, 1940, p. 7.

[26a] "The Housing Market in New York City" by Herbert S. Swan; a study made for the Institute of Public Administration; Reinhold Publishing Corporation, New York, 1944.

Meantime from 1930 to 1940 there was an increase of 500,000 families in the total population. As further witness that many of the old tenements are vacant because not fit for habitation nor worth rehabilitating, consider the facts that, of the total of 2,579,426 dwelling units in the city, 192,138 (7.4 per cent) were vacant in 1940,[27] and that in the Grand Street district, an area of the oldest slums, about 24 per cent were vacant.[28] The figures point to intensive doubling up of families. Despite the large ratio of increase of the population within the city, far greater is the ratio of increase in the Metropolitan *District*, which includes nearby parts of the states of New York and New Jersey—the ratios are 7.6 and 18.6 percent. This suggests migration from city to outlying areas.[27]

As for the supply by private enterprise and those who can pay their own way: for all of this group (that is to say, both those who can pay relatively high rents and those who can pay relatively low rents), FHA insured within commuting distance of New York, prior to 1940, some 8,500 dwelling units in multi-family projects, and, as we estimate it, some 100,000 more single family houses. Probably an appreciable proportion of these were for families with relatively low incomes. Parkchester, of which we will give some details presently, also touched these relatively low incomes. This housing for these groups may have had an effect on slum dwellers in one of three ways: (a) on a limited number who may have accumulated savings as a stepping stone to home ownership, (b) for a few who may have been able to afford the lower rents in some of these multi-family projects, (c) to the extent that (b) may have operated, some of the better downtown tenements may have been made available to those formerly living in the worst ones, thus to some extent relieving overcrowding in the slums. We will have more to say on this general subject of "filtering up" in the chapter on Urban Obsolescence and Redevelopment.

As previously stated there still remain in use, particularly on the lower East side, hundreds of thousands of obsolete and utterly unwholesome tenement houses.[29] They cannot all be vacated until more houses are built at rents which the poorest can pay. The only feasible plan for improving this situation is for replacement, rehabilitation, or redevelopment, not in terms of individual buildings, but in terms of areas including many blocks. Private enterprise has evinced an interest in such redevelopment. They have secured the enactment of a state act authorizing the organiza-

[27] Sixteenth Census of the United States, Series PH 1, No. 137. Bureau of the Census, Department of Commerce, Washington, D. C., p. 1.

[28] Sixteenth Census, op. cit. PH-2, No. 54, pp. 2–3.

[29] Nathan Straus, formerly a member of the New York City Housing Authority reports that about two million people live in tenements condemned by the Tenement House Committee of 1885 as unfit to live in and that they are considered prime investments. "The Seven Myths of Housing", Nathan Straus, New York, Alfred A. Knopf, 1944; p. 79.

tion of companies, vested with special rights, to undertake this work. Just how they may operate will be told a little later and in the chapter on Urban Redevelopment. Provided such organizations are adequately controlled in the public interest they hold considerable promise for the clearance of slums, but the extent to which they can house those of very low incomes remains to be demonstrated.

*Significant Housing by Private Enterprise*

Of special interest in the field of private enterprise is Parkchester, a project of the Metropolitan Life Insurance Company in the Pelham Bay Section of the Bronx. With 12,269 apartments housing a population of some 42,000, it is a dormitory city within the great metropolis in which its citizens, for the most part, pursue their daily occupations—in offices, in the Department of Education, the Fire Department, in public utility plants and the like. They are of both the white collar and the skilled labor groups, with a sprinkling of proprietors. It was designed for incomes ranging from $1800 to $4500 (averaging about $3000); rents range from $32 to $71 (averaging about $48). and include gas and electricity. The community is grouped in four superblocks or quadrants separated by winding main thoroughfares. Each quadrant has a spacious recreational area. *Plate XL, C, p. 170.* Facing these open areas and the minor streets of the quadrants are some fifty apartment houses of from 7 to 13 stories. In each quadrant are the essential neighborhood stores. Near the center of the development are larger stores and a large movie theatre. A power house and five ramp garages, for over 2500 cars, complete the physical project. Schools, churches and the like find their place in the normal way—there is no provision for them within the project.

Community life is officially organized in the recreational areas under trained leaders for all ages, from toddlers through the adolescents to adults. While there is no athletic field or auditorium there are athletic associations, social clubs, forums and singing societies. The significance and encouragement in all this lies in the fact that private enterprise, catering to a strictly self-supporting group, has seen the wisdom of developing to some extent those same community features and activities which characterized public housing and those certain semi-philanthropic "model" tenements which were the guide for public housing. In short, in addition to good shelter, there is encouragement for a wholesome way of living, both physically and mentally. In doing this the company had two objectives: one a good investment for its capital, the other the health and long lives of the public, whose health and lives they insure. Nor was it experimental with them, but rather a follow-up of their pioneer work of 1924 at Sunnyside, described earlier in this chapter. Its size gives emphasis to their confidence in the soundness of the principles. The Prudential Insurance Company pursued the same policy in the Douglas Apartments for negroes, in Newark, N. J.

Rents in Parkchester are lower than in most if not all other large private enterprise projects built for profit in Manhattan. So it is of interest to use it as a gauge of whether or not public housing comes into competition with low-cost private housing. The most nearly comparable public housing in New York is Vladeck Houses, on the lower East side, with a population of about 5000 people in six story elevator apartments.[30] It covers 30 percent of the land against the 27.5 at Parkchester and the density is 395 against 326 at Parkchester. Rents, in the period under consideration, ranged from $24 to $35, indicating incomes from $1440 to $2520, against incomes of from $1950 to $5194 in Parkchester, both calculated on the USHA formula of incomes being 5 times rent for small families and 6 times rent for large families, and Parkchester rents being adjusted to include water. This leaves a gap between the two of about 35 percent of the income of small families and 104 percent of large families, or a mean of 69 percent. With such a gap in incomes it is evident there is no competition. As subsidy pays for about 45 percent of the rent (i.e. 69% less 45%), even if the families in Vladeck were to pay rent at cost that would still leave a gap of 24 percent.

In other large projects such as Tudor City and Castle Village (*Plate XL, B, p. 170*), built strictly for investment and for a more prosperous group, special facilities for community life are less in evidence, but not entirely lacking. With the example of Parkchester we may reasonably hope that in the post-war era, encouragement of community life may be the rule in all classes of large-scale housing projects. There is a close relation between neighborly community life and a public spirited citizenship.

To sum up the Case History of New York: Faced with the worst of slums, housing reforms got under way nearly a century ago, "Model tenements" built by public spirited investors and philanthropists have made possible the development and evolution of plans and practices which have established precedents for national housing; preventive legislation has checked the further building of vicious types of tenements and set better standards which are within the reach of comparatively small commercial builders; constructive legislation has encouraged limited dividend companies to build for relatively low-income groups; insurance companies and savings banks have been authorized to invest in low-cost housing; an active state housing authority has been established; the local housing authority has financed one subsidized project entirely by the sale of its own bonds and has in the same way partially financed others; finally, looking to post-war days, the state has authorized the organization of development companies to redevelop the blighted areas.

[30] Ultimately a better comparison can be made with Fort Greene, which is not yet occupied by the group for which it is intended.

A shadow has passed over this fair picture of almost unbroken progress, possibly only the shadow of a passing cloud which the clearing wind of public discussion will dissipate. In 1943 the legislature dropped from an amended urban redevelopment bill a provision requiring equivalent housing to be supplied to the population dehoused by redevelopment operations —also reduced to $13,000,000 the state appropriation of 150 million dollars for public housing which the Housing Authority requested. The effect of these measures was promply made evident in plans by the Metropolitan Life Insurance Co., for a post-war project in "Stuyvesant Town," in the lower east side blighted area, comprising eighteen blocks between 14th and 20th Streets, from Avenue C to First Avenue. *Plate XXXIX, A, p. 169.* It accommodates about 9000 families paying rents of $14 per room, in apartments thirteen stories high. It will dehouse about 3,800 families paying from $4 to $5. As in Parkchester, no land is set aside for schools, churches or other such community organizations. The redevelopment company would be permitted to exercise race segregation, which has aroused much criticism. *See discussion of this subject in the Chapter on "Our Changing Culture"* (p. 121).

The gains are, that a blighted area will be replaced by a comparatively wholesome area (density about 1.04 that of Vladeck Federal Housing and 1.33 that of Parkchester), and that $50,000,000 will be spent in the post-war readjustment period, furnishing considerable employment—which presumably will be needed. But, since tax exemption (on any increase in valuation above the former valuation) extends for twenty-five years, there can be no immediate gain in municipal income—assuming the taxes were collectible, if not the properties in arrears should be seized. There will however be the arrest of the spread of the blighted area. These advantages would have been at the expense of the living conditions of the 3800 families forced lower into slum housing, had not the legislature later (March 1944) passed a bill making the State loan of $35,000,000 which was needed and requested by the Housing Authority. Obviously plans for public housing for this group should begin at once.[31] Since the Stuyvesant project involves urban concentration, contrary to the generally recognized desirable trend, housing for those dehoused should logically be in the outlying open areas, within easy access to work.[32]

[31] It is reported that the housing authority is planning two new projects on the lower East Side which will care for 3,500 families, and one for negroes in Harlem. Meantime the Metropolitan is planning for another large development on the lower East Side for an income group slightly above that of Stuyvesant Village, and another for negroes in Harlem. These moves seem to indicate that some of the major objections to Stuyvesant Village are being met by cooperative action. See N. Y. Times, December 3, 1944, p. 1.

### Rounding Out the National Picture

Throughout the nation as a whole the housing developments in this period have roughly paralleled those of New York, but more slowly and with local variations. For the lower income groups generally, local Housing Authorities were established to take advantage of USHA loans for slum clearance and replacements. For higher income groups (some of whom in small communities often lived on the fringes of the slums) FHA made better housing possible. That the rural areas have not been forgotten we shall see in the following section and in the section on Federal Agencies in Appendix A.

In other cities a variation from the New York pattern arose from the fact that for housing the former slum population there was generally available more open land than in New York City, so that we find more merging of blocks into the garden suburb type of plan. Only in a few of the largest cities have apartments been as much as four stories high; commonly they are three and two; two story row houses prevail in all but the larger cities. A good example is Lakeview Terrace, in Cleveland, on ground sloping to the river and bordering on industrial areas with a view of Lake Erie beyond. *Plate VII, H, p. 25.* Here is a varied arrangement of three-story apartments and two-story and a combination of two- and three-story row houses, with a central playground and, about the perimeter of the plot, occasional garage compounds, stores and the heating plant. The whole scheme ties in well with the city plan.

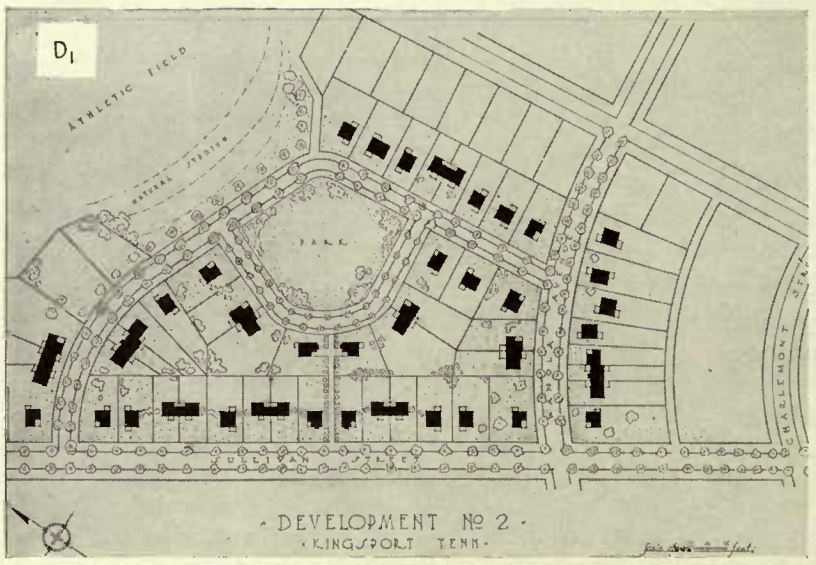
In this connection it may be in order to note that the first of the subsidized housing, that done under PWA, had been criticized as failing to adhere to standards which were as ruggedly simple as some thought should be attained in subsidized housing—a question which we discuss in a subsequent chapter on Design. One of the features which frequently appeared in these houses, which has become standard in European housing and which we miss in the later USHA-aided housing, is the balcony, which can play an important function in the family life—of this also more in the chapter on Design. Good examples of this are found in Cedar Central (Cleveland), in the Jane Addams Homes and Trumbull Park Homes (Chicago), in Westfield Acres (Camden), in University Homes (Atlanta). The Hosiery Workers in their co-operatively owned Carl Mackley Houses (Philadelphia), went further, added sun bays to balconies. *Plate VIII, A, B, C, p. 26.*

[32] For further discussion of the objections, see: *Public Housing* for April 1943; National Public Housing Conference, N. Y., p. 2. Also: *CHC News*, June-July, 1943: Citizen Housing Council of New York, 470 Fourth Ave.

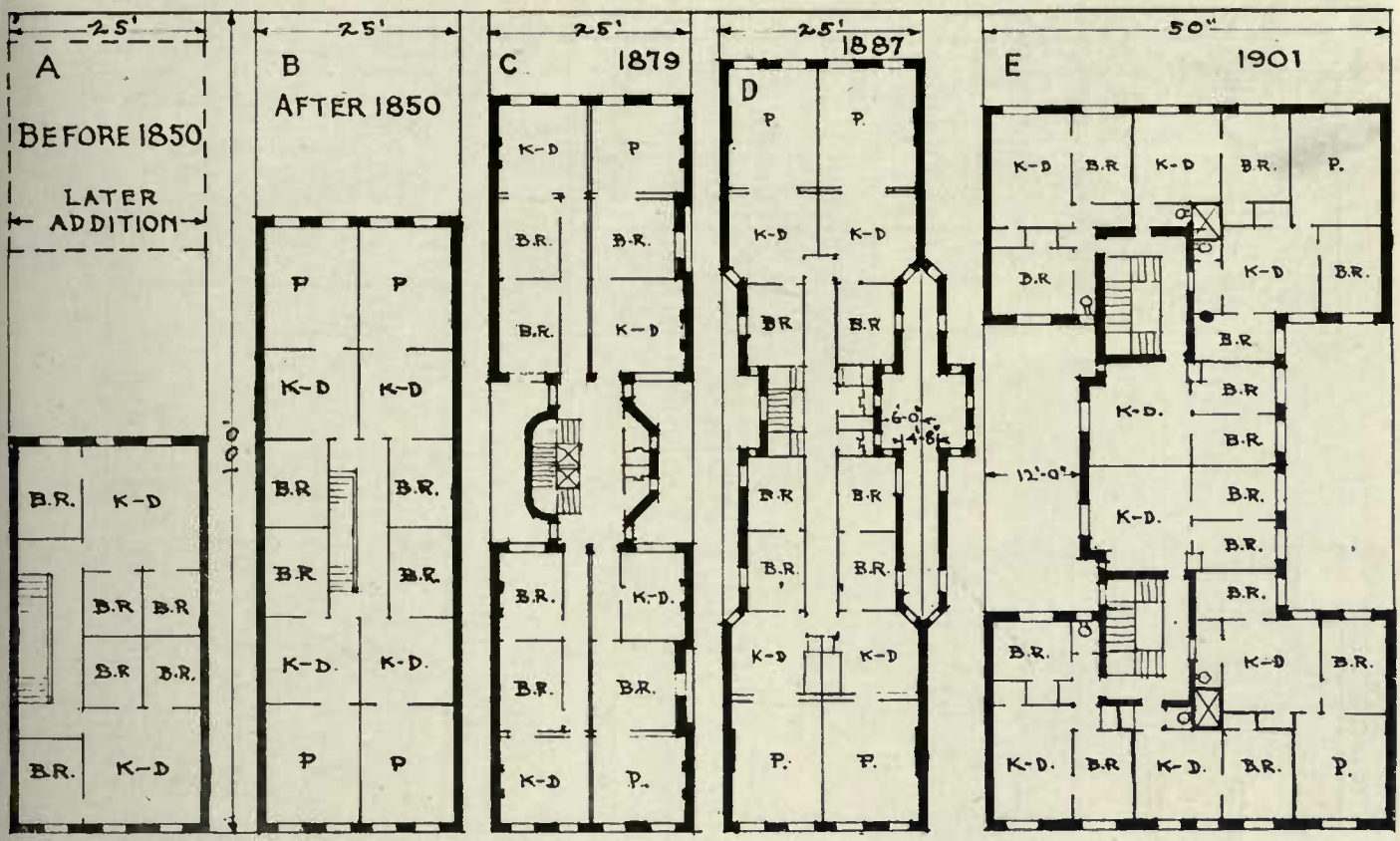
# PLATE II. A CENTURY OF COMPANY AND OTHER GROUP HOUSING



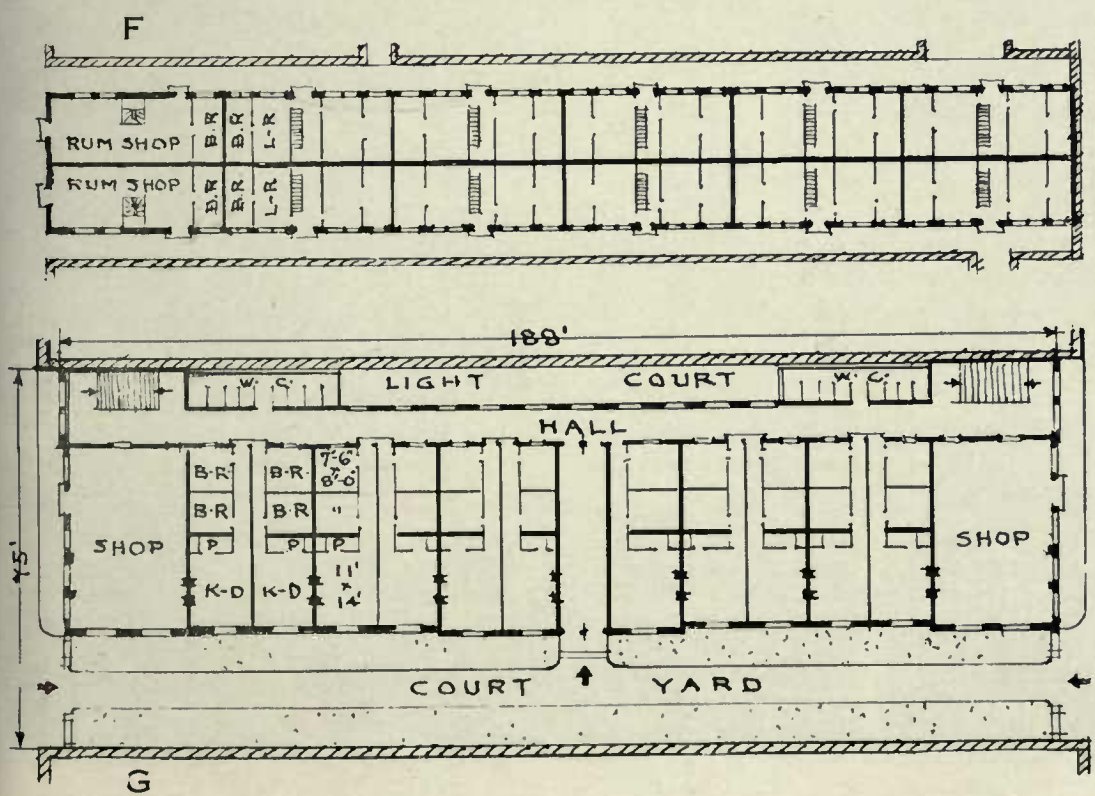

A. 1840. Chicopee Falls, Mass.; company housing remodeled in 1940 by Housing Authority with FHA loan. B. 1816, (circ). Coventry Town, Harris, R. I., recently modernized. C. Cooper River, N. C., Old slave quarters. D. 1919, (circ). Kingsport, Tenn., A company community, Architect, O. Mackenzie. E. 1941. Wilmington, N. C., Housing for War Workers. $F_1$. Montgomery, Alabama, Negro Slums; $F_2$. PWA replacement housing—Archts: C. G. Cooper and M. G. Smith. *See plan Plate VII.*

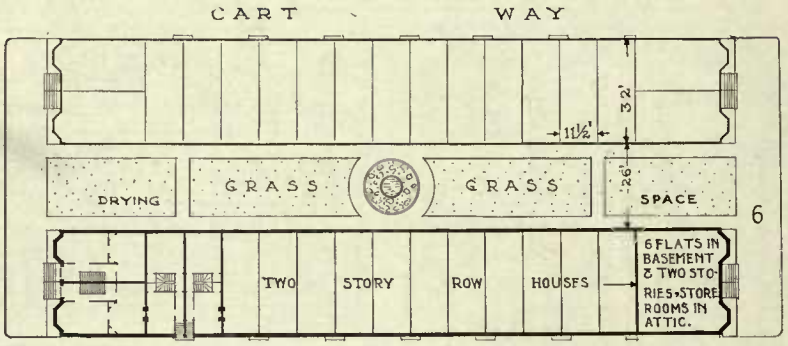



The above are speculative or commercial types on narrow lots. Below are two early efforts at getting outside light and air by using wider lots; later solutions are shown on Plate IV. A. Before 1850, a common way of transforming an old residence, leaving 4 of 8 rooms dark. B. After 1850, the "Railroad" tenement, 8 of 12 rooms dark. C. After 1879, the "Dumbbell" tenement, 4 of 14 rooms dark. D. After 1887, all rooms with nominal outside light, but 6 with windows only 4′–8″ from windows across the court. E. One of better type built under the "New Law" of 1901, which encouraged wider lots. *See also Plate VII, buildings at lower right.* F. Gotham Court, 1850. All outside rooms; W. C.'s in basement under courts, vented through grates in pavement, 5 stories. *Location of windows is hypothetical.* G. Workingmens Homes, 1855. "Model Tenements" (the first); wider courts than in "F"; Thro' draft; W. C.'s on each floor; in each apartment one interior bedroom, one with window on public Hall; 4 stories. . .



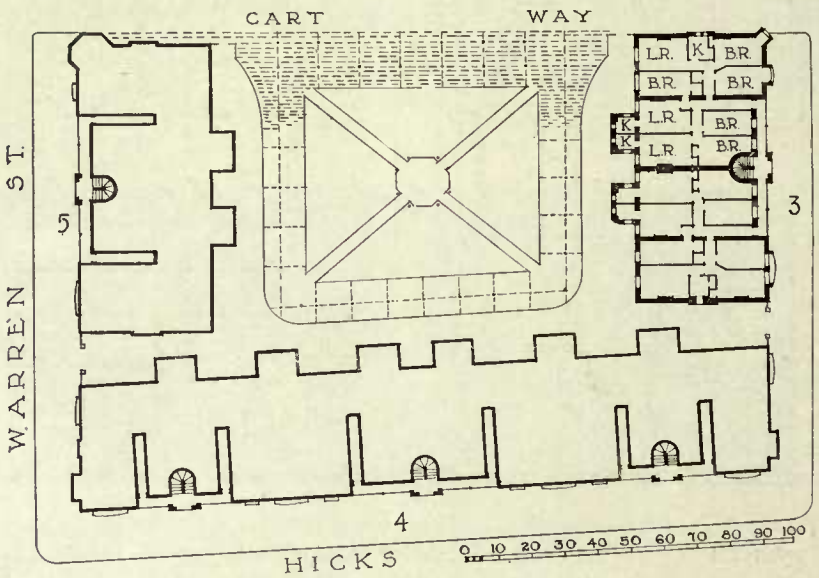
# PLATE IV. IMPROVED HOUSING PRIOR TO WORLD WAR

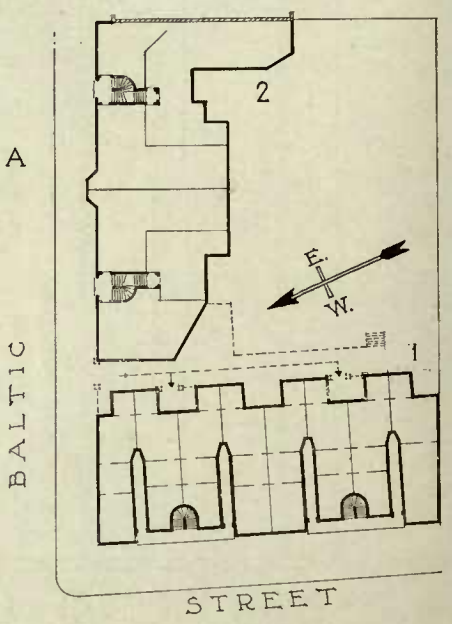


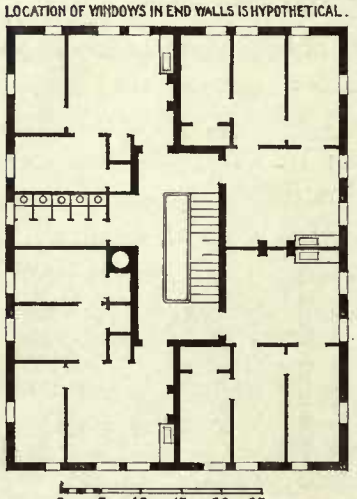

A. 1878-80(?). Tower and Homes, Brooklyn. First housing group of size and standard adequate for survival; promoted by A. T. White, designed by Wm. Field & Son; remodeled 1938-40 by Cameron Clark, AIA. No. 1 built first, others in close succession. No. 6, 2-story row houses, with 3-story flat buildings at ends.

B. 1879. First Prosposal of block as unit of development by S. W. Dresser, C. E.; unit plans by Geo. B. Post AIA.

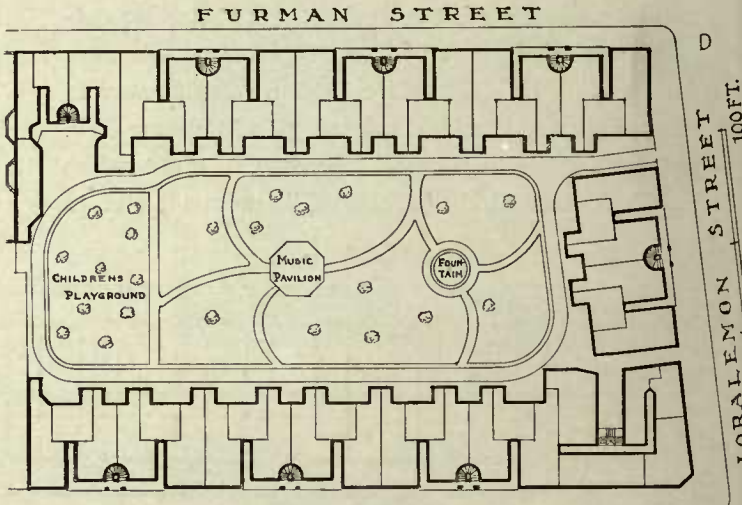
C. 1881. Half-block development for Improved Dwelling Assoc., Vaux and Radford, Arch'ts; buildings on side streets follow plans by G. W. Da Cunba.

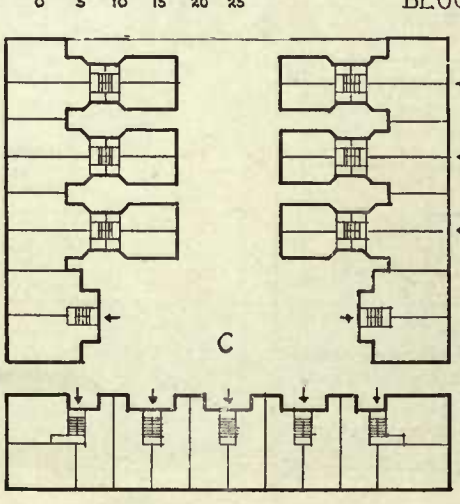






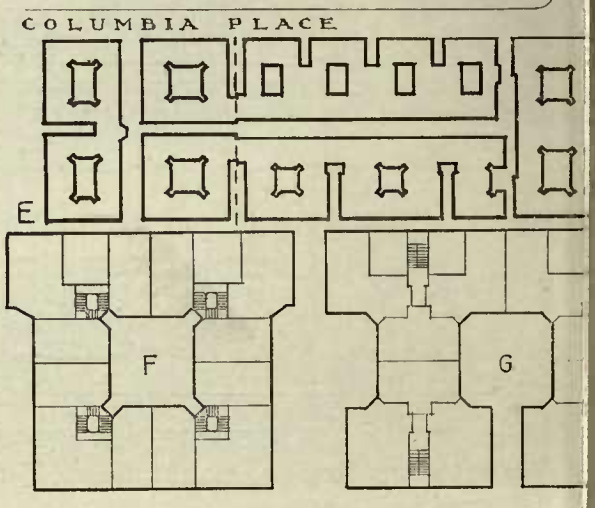




D. 1884. Riverside dwellings, Brooklyn. Same owners and architects for A.

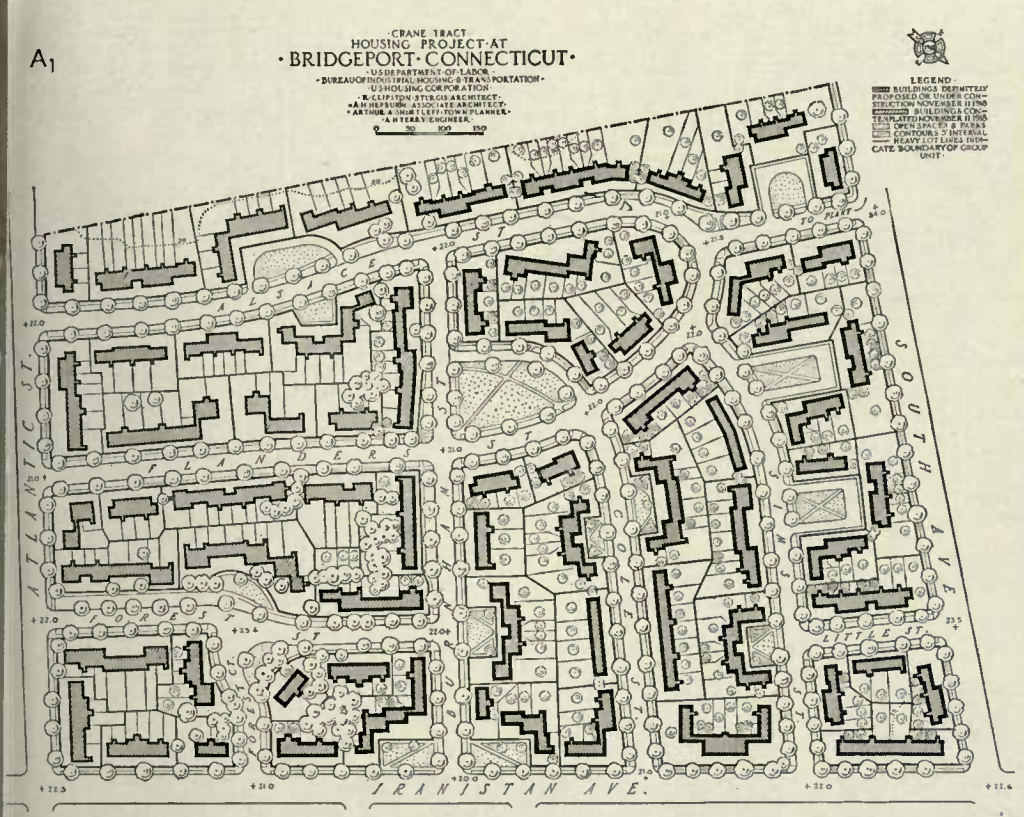
E. 1898. Entire block by City and Suburban Homes Co. Ernest Flagg, Arch't designed about alternate interior and exterior courts.

F. 1896. Construction unit as first designed by Ernest Flagg, for economy of exterior walls.

G. 1906. Phipps Tenement House Number One, Grosvenor Atterbury, Arch't: construction unit designed to improve circulation of air in interior courts.



A1




A2

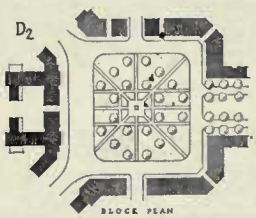
B

C

D1

A1, A2, B & C. Housing in Bridgeport, Conn.; designers named in legend for A1. A1. Crane-Tract, in industrial area; planned for 377 families mostly in row houses and flats—257 built. A2. Row houses. B. Black Rock apartments. C. Mill Green row houses. D. Yorkship Village, Camden, N. J., for the Emergency Fleet Corp. D2, D3, D4, D5, Yorkship Square and houses facing it. Electus Litchfield, Arch't.

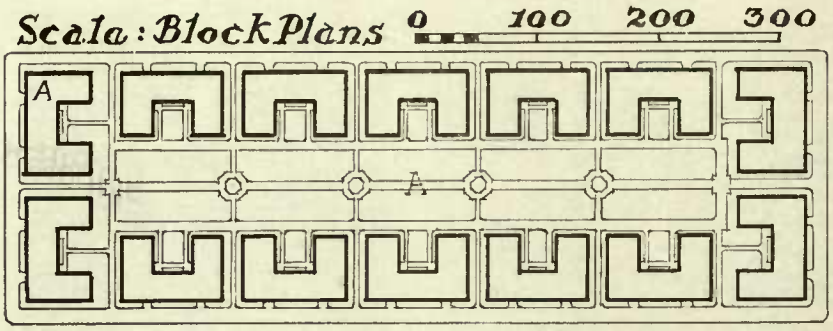
D2




D3

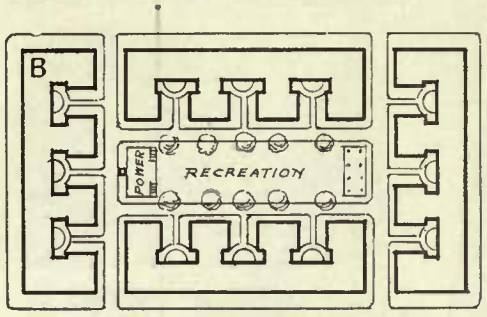
D4

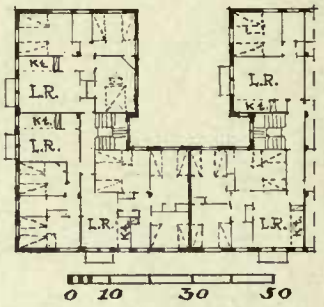
D5

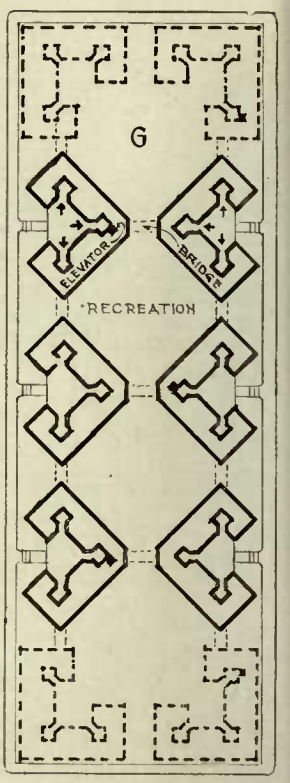


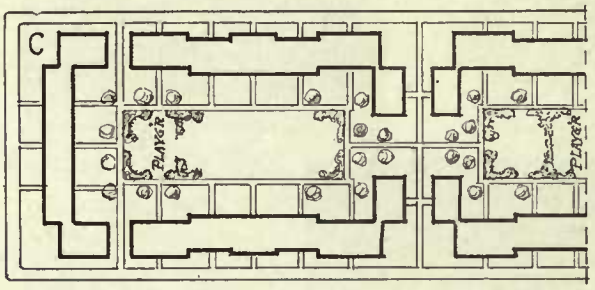

A. 1919. Study of development of a typical block by Andrew J. Thomas.

B. 1920. Study of development of a specific block by G. H. Gray. G. Messa Verde apartments, Jackson Heights, N. Y. C.; 6-story walk-ups with one auxiliary elevator; by S. Lengyel and H. A. Smith.



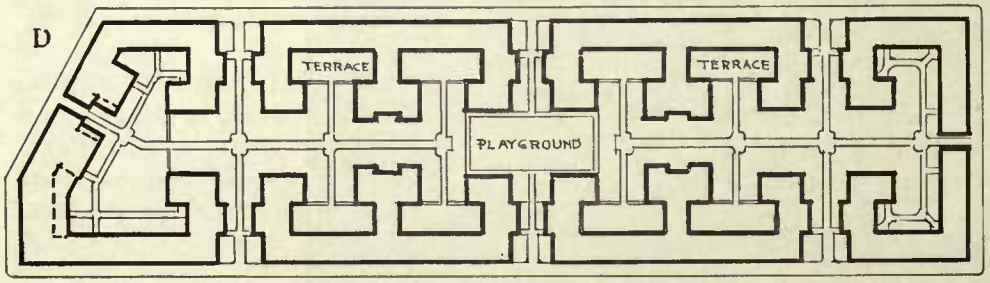



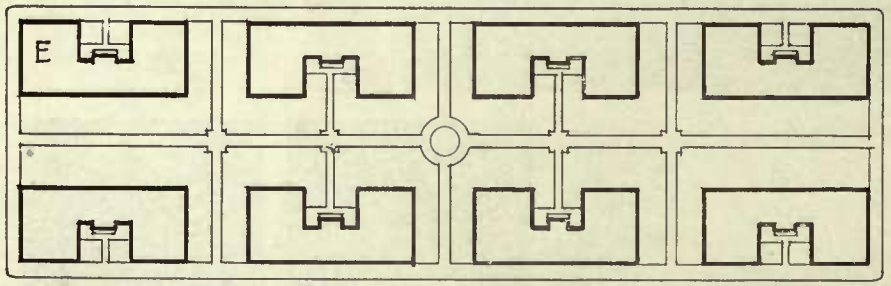



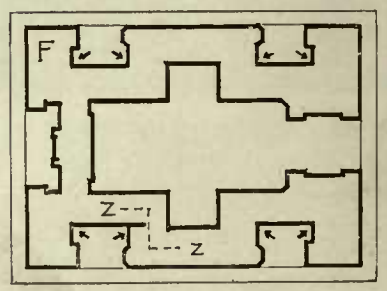


C. 1926. Sunnyside, Long Island City, N. Y. C. Cooperative housing, half of typical block, by Henry Wright, Clarence S. Stein, F. L. Ackerman. $C_1$. Interior of block, showing flats and row houses.


D. 1926-28. Paul Lawrence Dunbar apartments, philanthropic and cooperative, 6-story walk-ups. $D_1$. Interior Court. Arch't. Andrew J. Thomas. See *Plate VII, $D_1$*.



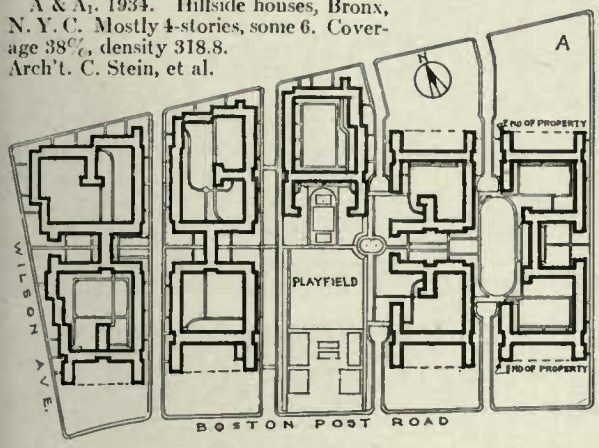

E. 1930. Academy apartments limited dividends, 6 stories, elevators, by Springsteen and Goldhammer.

F. 1930. Amalgamated apartments at Grand Avenue, cooperative, 6-stories, elevators, by Springsteen and Goldhammer. Note use of Z units.

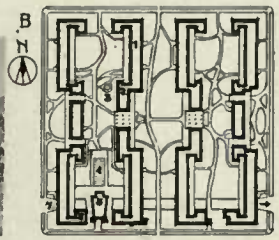
General Scale in Feet:
0 200' 400'
100' 300'

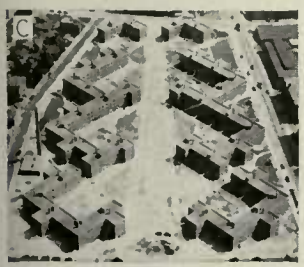
Note: 1. A, $A_1$, B, and C were built and owned as limited dividend projects, under the Federal Housing Division; the others were federal projects of the U. S. Housing Corp., which also completed C. 2. Entries are indicated by the walks.

A & $A_1$. 1934. Hillside houses, Bronx, N. Y. C. Mostly 4-stories, some 6. Coverage 38%, density 318.8. Arch't. C. Stein, et al.



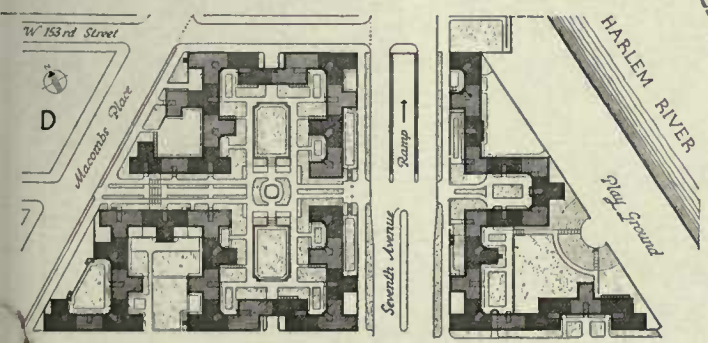


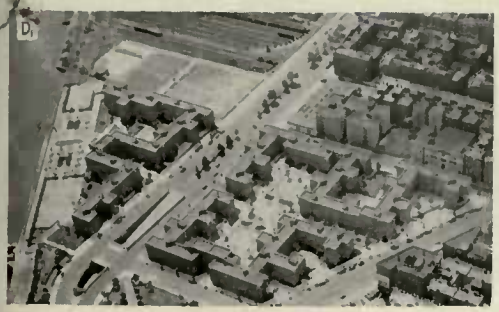


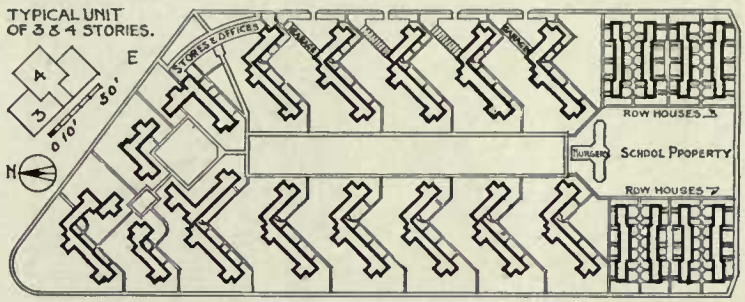

B. 1935. Carl Mackley houses, Juniata Park, Philadelphia. Cooperative, 3-stories plus laundries and recreation space on roof. Coverage 30%, density 206. Arch't. (directing) P. Barney. *See Plate VIII, C.*

C. New Towne Court, Cambridge, Massachusetts. Coverage 21%, density 294. Arch't. H. C. Robbins, et al.



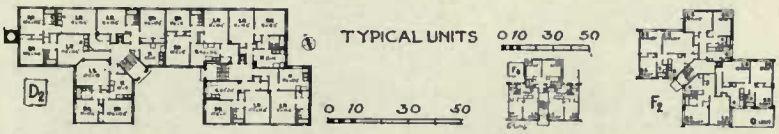

D. 1935. Harlem housing, N. Y. C. 4 and 5 stories; coverage 31%, density 259. Arch't. A. M. Brown, et al. *See Plate VIII, D.* $D_1$. Note old- and new-law tenements in lower right. *See Plate III.* $D_2$. Typical unit above (over F)

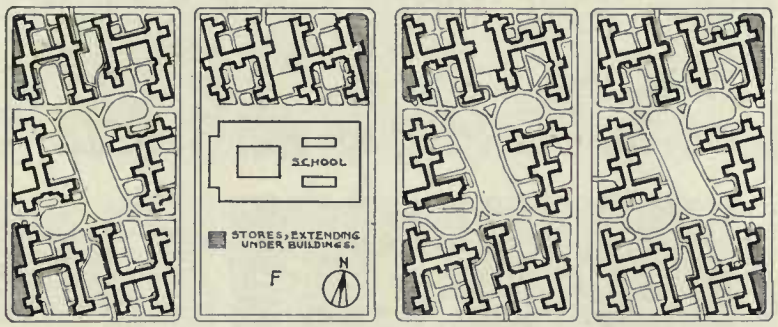



E. Lockfield Garden apartments, Indianapolis, Indiana. Coverage 20%, density 128. Arch'ts W. E. Russ and M. Harris.

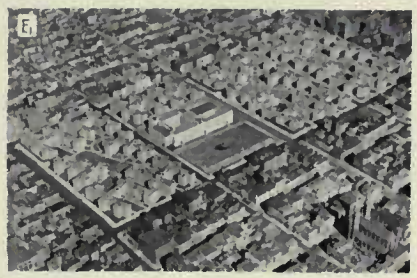
F. 1936. Williamsburg, Brooklyn, N. Y. 4-stories, coverage 33%, density 281. Arch't. R. H. Shreve, et al. *See Plate VIII.* $F_1$. Shows type of slums cleared. $F_2$. Typical units.

G. 1936. Patterson Court, Montgomery, Alabama. Coverage 30%, density 88. Arch'ts. C. B. Cooper and M. C. Smith.

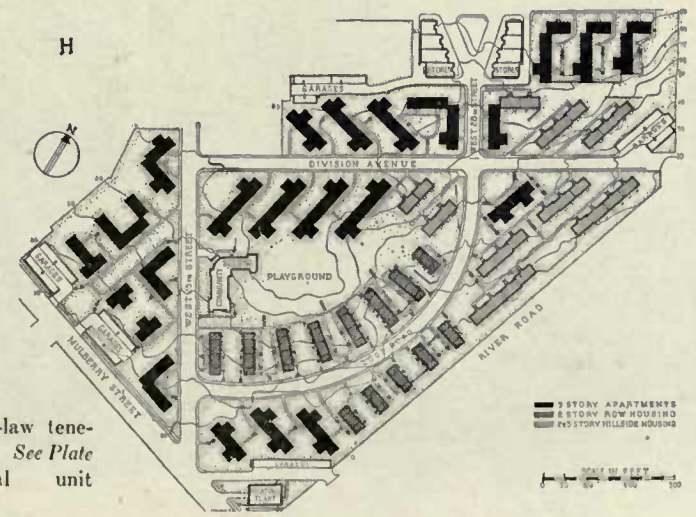







H. Lakeview Terrace, Cleveland, Ohio. Coverage 26%, density 128. Arch't. J. L. Weinberg, et al.






A. Cleveland Cedar Central apartments. Arch't. Walter McCornock. $B_1$ and $B_2$. Trumbull Park, Chicago. Arch'ts. John A. Holabird, et al. C. Philadelphia, Carl Mackley houses, varied use of balconies, low windows, and other amenities. *See Plate VII.* D. New York, Harlem houses. Dignity and charm are due to fine proportions, brickwork of unusually good color and texture, and to broken skyline resulting from irregular plan and occasional change in height. *See Plate VII.* E. New York. Williamsburg housing. Corner windows function much like bow windows and save wall space for furniture. *See Plate VII.*

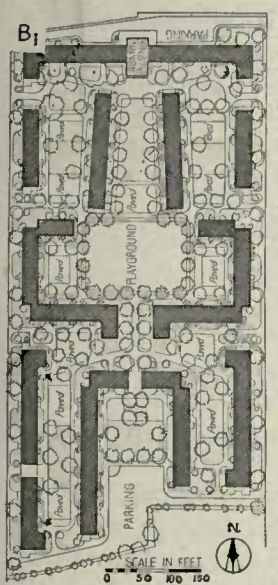


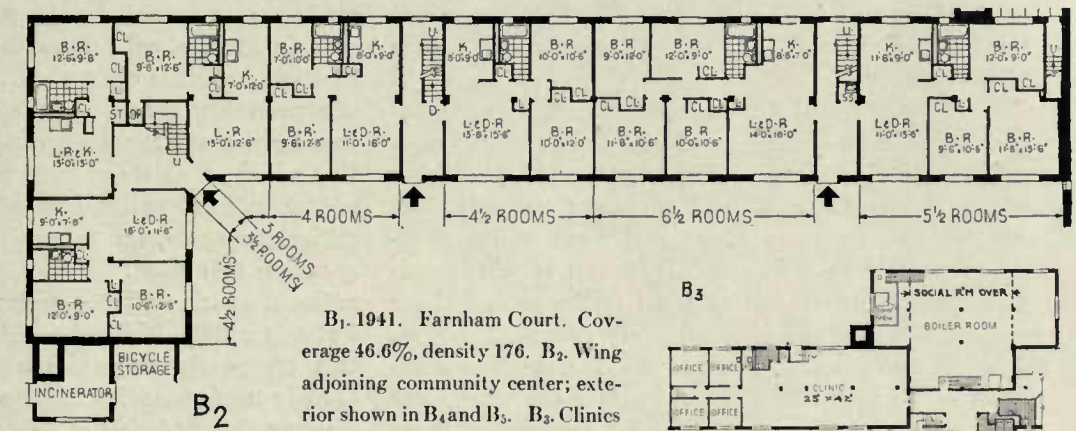


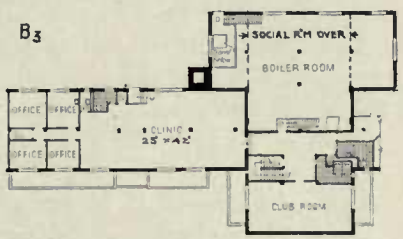

Note: Prevalence of small open spaces and use of stucco for variety. Population is mixed white and black in about the proportion found in the former slums— ⅔ black in Elm Haven, ⅛ in Farnham Court.

A1. 1940. Elm Haven, Coverage 21%, density 85.5. Heating plant, offices, community rooms are in upper center; public school, north center, parochial school east of project. A4. Front yards. A5. Rear yards. A6. Attractive dining-kitchen space. Unit plans, *Plate XLII, B.*




B1. 1941. Farnham Court. Coverage 46.6%, density 176. B2. Wing adjoining community center; exterior shown in B4 and B5. B3. Clinics are characteristic of New Haven projects. B4. Note loose boulders for boys' play in small playground. B5. Another type of small playground.


## SECTION II. PUBLIC HOUSING POLICY: A STRIDE IN THE MARCH OF CIVILIZATION

### Underlying Philosophical and Political Principles

*Housing and Civilization*

The gradual build-up of Federal participation in the production of low-cost housing calls for a critical review of the political principles involved, of policies developed, and of accomplishments.

In essence public housing is, or should be, an investment in citizenship. So long as we have slums we will continue to generate a slum type of citizen. It is beside the point to argue about which came first, slums or the degraded lives common in slums. The simple fact is, a slum environment constitutes a serious, an almost insurmountable handicap to decent living, to efficient and to loyal citizenship. There are probably few who would not recognize that slums are an unfit environment in which to rear the rising generation of future citizens—which probably comprise between a fourth and a third of our total population. What is true of the slums is in only somewhat less degree true of the housing for a deep stratum of the population living in neighborhoods only slightly better. Any breeder of livestock knows the handicap of raising stock in unsanitary quarters. The testimony of the biologists, the geneticists, and the psychologists, particularly the story of Kamala, the wolf-child (all outlined in a later chapter, p. 127) should convince any who may have doubts as to the powerful influence of environment.

In the critical times through which we are passing, it should be evident to all that the quality of each and every citizen is of importance. A citizenship which is physically fit and mentally well-adjusted, efficient and loyal, is a national asset which overshadows all others. So not only for reasons of humanitarianism, of urban and national self-respect, but for reasons of urban and national safety and preservation, it would seem that in place of the degenerating influences of the slum, we must substitute the wholesome influence of good housing. The environment of home and neighborhood is, in our generation, coming to be recognized as having an influence on our citizens comparable to that of our schools. For evidence turn to the report of the superintendents of certain London schools, on the change in students after moving from slums into good housing. *See p. 62.* To supply a good home and neighborhood environment for the entire population living in sub-standard housing seems to be one means open to us for raising the general level of our civilization, particularly in the United States, a means which this writer believes to be not only as effective as, if not more effective than, our public school system, but necessary for the full effectiveness of that system.

Civilization is not uniform in any nation, nor is it uniform as between nations. Throughout the world and within each nation there are many strata of civilization. One measure of the civilization of any nation is the extent to which that nation has obliterated the disparity between those strata, the extent to which it has made available to those in the lower strata the opportunities and privileges of the traditional upper strata. Usually civilization seems to advance by slow plodding as through a jungle; at relatively rare intervals it advances by bold strides, as through a clearing—such an advance as that made in the period of the development of the modern sciences. In the public housing of England and of northern Europe I see one of those long strides in the progress of civilization. Is the progress we have made in this country toward the same goal?

*National and Local Responsibilities*

The extent and degree of poor housing conditions vary in different parts of the country, but unfortunate conditions in one part of the country cannot be ignored by the country as a whole. A strike in the steel industry in Pittsburgh may initiate a rise in the price of steel, which affects directly or indirectly every industry in the country; a strike in Detroit may affect directly purchases of automobiles throughout the country. A flood on the Ohio or the Mississippi, a conflagration in San Francisco or Baltimore, a hurricane in Florida, calls upon the sympathy and the resources of citizens everywhere. All these emergencies, wherever they may be in the breadth of the land, we care for through the American Red Cross, an organization which, with its phenomenal growth, is a symbol of our national active interest in local misfortune at critical moments, the voice of the people of the nation speaking in unison. If temporary misfortunes are a national consideration, surely the more chronic misfortunes and hardships should be so in added measure—this on purely humanitarian grounds. Widespread chronic misfortune indicates a weakness, a laxness in government, and should be corrected by government itself.

To meet changing or new conditions, a new outlook, new legislation, is called for. In the last century, in order to promote the extension of college education, the Federal government gave land grants for the support of state colleges—a Federal subsidy to local education. The justification was that the education of its citizens was a national concern. Similarly, land grants (direct subsidies), were made to the privately owned transcontinental railroads for the common good of the country. If there was abuse of these subsidies, it demonstrates the need of safeguards, but it does not invalidate the principle. In 1937 Congress determined that decent housing has a bearing on the well-being, health, morality, and crime of the country, that it is a factor in the safe, wholesome,

and enlightened development of the country, and as such is a matter of Federal concern. The very preamble of the Constitution insists on the promotion of the general welfare. Each state in the Union, under the so-called police power, is expected to guard the safety, health, morals and welfare of its people.

No one now questions the propriety of public ownership and administration of public parks and playgrounds. No one now questions the maintenance of a system of public education from kindergartens through grade schools, colleges, and technical schools to the universities, through adult education, and through libraries and many types of museums; nor the propriety of public clinics, of hospitals, of sanitoria for those physically and mentally defective; yet as a general public charge many of these are relatively modern institutions. Since the earliest Colonial days, out of public funds we have been taking care of the indigent-aged and all others who were too poor or otherwise incapacitated to care for themselves. Yet in each and all of these undertakings, including our public schools, we have of necessity been subsidizing a large portion of those who enjoy these various privileges and who otherwise would be without them. We have prided ourselves that this was the way of our great democracy. Yet it harks back further, to a tradition which our Colonial ancestors brought with them, to days of "noblesse oblige," when the nobility felt themselves obligated to care worthily for their dependents. If there are individual "nobles" left, any who claim a privileged position, then in consistency they must assume the responsibility of righting the wrongs of the underprivileged. In the subsidizing of public housing there is no new principle involved. To correct the abuses of unequal privileges this nation came into existence.

That slums are undesirable no one questions. From a purely economic point of view the detrimental effect of slums on surrounding properties is recognized as a serious menace to urban economy, both because of the direct interest of the public through constantly declining tax returns due to the spread of the slums or "blighted areas," and indirectly because of the interest of the owners of surrounding properties—the detailed facts of which we give in the chapter on Urban Growth and Urban Rehabilitation. Recognition of this situation has recently been dramatized by the organization through NAREB (National Association of Real Estate Boards) of the Urban Land Institute, whose membership includes, besides the real estate fraternity, insurance companies, banks, mortgage companies, public administrators, students of economics, city planners and housers, which groups are well represented on the board of trustees. It is what they seek which is especially significant and dramatic, nothing less than: (a) Federal subsidies to make possible writing down the values of properties in blighted areas in which private capital undertakes rehabilitation; (b) municipal acquisition (through condemnation if necessary) of all land needed for rehabilitation and for the wholesome growth of the city, with the right to lease or sell to private enterprise the property thus acquired. *For details see section on Urban Rehabilitation p. 149.*

Reference to this is particularly pertinent because it shows a new trend of thinking on the part of traditionally conservative groups, notably the great financial institutions of the country—traditionally they have said, "Let the Government keep out."

From the social point of view, while the public is generally sympathetic to the elimination of the slums as a human environment, there is diversity of opinion as to ways and means of accomplishment. For the most part the urgency for slum clearance and rehousing the families dehoused has, heretofore, been based on considerations which in themselves might very properly be classed as the responsibility of the local communities, namely the poverty and plight of the individual families, considered from the humanitarian point of view, and also on the economic fact that ill-health, juvenile delinquency and crime, which are disproportionately large in the slums, are a heavy charge on the city's finance.

But there is that other consideration which concerns the nation even more than it concerns any locality: the importance of the slum population as citizens. For citizens are the basic substance of the nation. The quality of the citizens is the quality of the nation, a fundamental concern of the Federal Government. In this writer's opinion it is *the* fundamental justification for Federal participation in substituting a wholesome environment for a slum environment. Thus from the Federal point of view we see in slum clearance and better housing an important political factor—this in addition to those economic and social factors which are primarily the concern of the local government but which, because of their magnitude and wide distribution are also a concern of the Federal Government.

So any policy for improving the living conditions of those in the slums should, obviously, be one undertaken *jointly* by the local and the Federal Governments. Both have at stake problems which reach deep into the economic, social and political life of the community and of the nation. Failure of either to carry out their phase of the policy must inevitably weaken the desired results. Incidentally this is a factor to be kept in mind in gauging the success of specific housing operations.

In 1943 a dominant element in the NAREB, ULI, and the National Association of Home Builders (NAHB), took a stand opposing public housing, NAREB terming it a "social and political menace." But by no means do all realtors share this view, as witness the following words by R. R. Randall, a realtor of Philadelphia, prominent both locally and nationally:[1]

[1] "A Private Realtor's View of Public Housing," by Roland R. Randall, past President, Philadelphia Real Estate Board, Chairman, Philadelphia Housing Authority; Read before the Citizens' Housing Council of New York [meeting at] Cosmopolitan Club, 129 E. 65th St., New York, May 23, 1944. For purposes of condensing, the above excerpts have been arranged in a different order than that in the original.

"... I do not only consider this entire broad problem of housing a governmental responsibility, but I believe that subsidized public housing is an inescapable necessity ... necessary as a means of establishing a beach-head from which to attack and counter-attack the evil of slums and the devastation of blight that is a threat to the physical health and welfare, as well as the solvency or financial health and welfare of the cities infested with them ... necessary to provide a base for the rehabilitation of human values, as well as property values.... It may well form the nucleus around which private industry can revive dying neighborhoods and through rehabilitation, restore them to desirable conditions of livability. Public housing is needed to reverse the tendencies toward neighborhood deterioration ... to prevent the wholesale exodus of more prosperous families from the older portions to new housing developments along or beyond the perimeter of the city.... It provides neighborhood protection from the spread of blight.... I know from personal knowledge, as it has been clearly proven by the projects of the Philadelphia Housing Authority, and many others, that public housing is more than just brick and mortar shelter, but of even greater importance, it is the means of educating people to higher standards of housekeeping and social conduct...."

On the relation of government and housing Mr. Randall states: "... The purpose of all democratic government is for the creation and preservation of the home wherein every citizen is a master and a king and when carried out to the nth degree, we might well conclude that the ultimate measure of success or failure of all government is the adequacy and quality of the homes of its citizens or subjects. In fact, we might carry it further and state that safe, decent and sanitary housing is the basis of all civilization. If such be the case, then certainly the Government has a justifiable right to interest itself in the field of housing, both public and private and to do everything possible within the framework of our established political and economic system to foster good housing and what is assumed to be a corollary—good homes.... We cannot through blindness or obstinacy put our faith eternally in an economic system that produces and fosters the growth of slums, or tolerates their existence. We should clearly recognize that bad housing and slums are an indictment pointing out our indifference, stupidity, insincerity of purpose or short-sighted selfishness in the operation of an imperfect political and economic system, and do something about it by positive and direct action to make the necessary adjustments to correct it ... slums are a dead weight from an economic view-point, indicative of the inefficiency, waste, and loss of property values, a symbol of our apathy, lethargy, selfishness, ignorance and stupidity, a mockery to our boasts of our high standards of living, our industrial capacity and our system of free enterprise ... due credit should be given to public housing for pointing the way to new possibilities for better living in planned communities; for conducting the experiments in new fields which have given experience to architects and builders; that have provided new techniques in management and have coped with social problems and have, with advice and guidance, given such substantial aid in the readjusting and re-education of less fortunate people to a higher social and cultural scale of living under new and higher standards of living conditions. Public housing, for many, has provided the first rung on the ladder on the way up to a higher social level and conception of living. With public housing providing the foundation for better living for those most in need of better homes and neighborhoods, private builders and Realtors should be given to understand and to realize, that what is the ceiling of public housing is the floor for private enterprise...."

As to the place of housing in our National aims Mr. Randall continues: "... all we can hope to gain from this war with all its tremendous, tragic and terrible sacrifices is the right to make our homes, our neighborhoods and our cities desirable places in which to work and live.... For each of us, we will have won or lost the war according to how well we create a means of a better life within the range of the individual orbits of our people in the common, everyday world of our day to day experience in the art of good living ... what is best in the public interest is best for all business, and to define it more particularly, what is beneficial to the public at large as pertains to the providing of homes, is of benefit to real estate as a business and to me as a Realtor.... The fundamental worth of all effort, either as a public or a private enterprise for whatever purpose or profit, is the amount of service it actually renders for the common good...."

### *By Whom Are Policies Initiated?*

This joint responsibility brings us to the question of the initiative for public housing policies. By whom and how should such policies be initiated? In this country and those more advanced democracies of northern Europe, including England, where public housing has progressed furthest, the *official* initiative has been taken by the central government. Some member of the parliament or the congress, representing a district where conditions were acute, has urged national action—as did Senator Wagner of New York. But the *prime* initiative has been taken by groups of public spirited citizens who have studied their local conditions and compiled the convincing data. In no sense has the policy been imposed from above. It is a good example of the method of growth in the democracies—enlightened disinterested research preceding public action. Let us look more closely into the workings of this procedure in the case of housing.

The people in the slums are themselves largely inarticulate. Most of them are engaged in unskilled occupations, which, unlike skilled labor, are mostly unorganized and are poorly paid. Most of the people are wholly engrossed in their needs for mere existence, and have neither the organization nor the educational equipment for the consideration of the needs of the group as a whole. There are, however, some individuals who rise from this group, and, with vivid memories of their early background, become active in those civic organizations which instigate housing legislation. In addition to these civic organizations, organized labor has in recent years been a strong backer of housing legislation; in fact without labor's backing it is doubtful if we would have any public housing legislation, and while skilled labor is not in large part in the slums, it is close to them.

### *Rivalries Between Economic Groups*

In a recent article advocating "the rehabilitation of nearly one half our population by every scientific and social means at our disposal," Professor Ernest A. Hooton of Harvard suggests that, "opposition to better nurture, better breeding [in the genetic sense] and a more intelligent population often comes, it seems to me, from those who are determined to retain power over the masses."[2] In an acquaintance widely scattered over this country, I know of but one who openly opposes the advance of the populace on the grounds suggested by Professor Hooton; but I do know quite a number whose arguments and actions make it clear that they believe in the efficacy of domination by a small privileged group, presumably on the ground that, if our civilization is to maintain a high standard,

[2] Morons In What?, *Woman's Home Companion, August 1943.*

those with the highest education and culture should dominate it.

This position, obviously at variance with our traditional democracy, might have some plausibility if such groups could be counted on to act at all times as holders of a trust for all the people. Even though for a time it might be more efficient, there is risk in placing power in a ruling class, a risk which was considered unwise when the nation was founded and which in our day would seem even less wise. The logical alternative policy, if our civilization is to advance, is to raise the educational and cultural standards of the masses, as Professor Hooton urges, "by all available means." If public housing is or can be made such a means, then is it not reasonable that it should be extended until all who now live in the demoralization of the slums may live in an encouraging and constructive environment, such as may be had in a public housing project? While in this procedure there would be abundant opportunity for the advice and coöperation of those of the upper group who have the better education, there would be no place for domination.

The issue of possible class rivalries, which Professor Hooton raises, deserves further frank discussion. First we may ask, "how extensive might this feeling be?" Obviously if there is one group, A, intent on maintaining dominance, then we should expect opposition from group B, which is dominated. Obviously Group A is confined largely to those whose incomes enable them to maintain a certain standard of education and general culture, and probably most would be people who have some security of income, over and above salary. If we assume such incomes to range upward from $5,000, then group A is some part of that 2.1 per cent of the total population which enjoys such incomes; if we assume such incomes range from $10,000 upward, then the group is some part of 1.3 per cent of the population. *See Graph IX, p. 142.* In either case their numbers would be small. While the figures are for the pre-war period, it does not seem likely that there will soon be any fundamental changes in the proportions. Any strength which the A group has obviously is not in numbers, but in being entrenched in a defensive position. The one conspicuous case which we have seen of clashes between economic or cultural classes, is that between organized labor and management, management having the advantage of an entrenched position, labor that of numbers.

In this situation management has supplied the initiative, the enterprise, the capital, and, most important, the jobs, and during the formative years of industrial development, was able to dictate the terms on which labor was employed. Thus to meet the competition from foreign countries, management, as also we have previously pointed out, procured immigrants from those countries where wages and likewise the standard of living were lowest, and because the accustomed standard of living of these immigrants was low, it was thought reasonable to keep them low in this country. Broadly speaking, it is these immigrants and their descendants who make up a considerable portion of the population of our urban slums—though not all, for among them are the descendants of the native population of the cities and of those who have come from the rural areas. Unfortunately the standard of wages and of living for most industrial employees was set by those of the immigrants.

Since for the most part the immigrants had little education, spoke a foreign language and had traditions quite different from the rest of the nation, very naturally they were long looked upon as an inferior group. The lot of many immigrants may have been no worse than in the old countries, and there was the hope, even the promise, of something better. At that time the situation may have seemed reasonable and justifiable, as part of a national policy for industrial expansion. But now, in the perspective of history, it seems clear that a fundamental mistake was made in not providing more fully to meet the promise of better opportunity for the advancement of these immigrants to the scale of living of the normal native population, and to the place of informed and responsible citizens. Lack of such opportunities, or lack of sufficient income to buy them, is at the root of the dissatisfaction and unrest of labor and of any clashes of class which may occur. From the point of view of the general public, of the nation, a large stratum of the population with a culture so widely separated from that of our generally accepted national standard cannot be looked upon as healthy or stable. "By all means which are available" the situation should be rectified, and public housing seems to be one such means. "*Qui transtulit sustinet*" (he who transplants must sustain), as reads the motto on the Seal of Connecticut.

It may be pertinent at this point to note that basically it is the lack of adequate incomes which creates our housing problem. If for those living in the slums we could bring about a substantial increase in annual income without increasing the hourly wage rate, we could dispense with subsidies; but until that is accomplished, subsidies seem to be in order. This point we discuss more fully in the chapter on Insufficient Incomes (p. 128) and that on Labor in the Cost of Housing (p. 185).

In the field of housing there is a certain rivalry which is basically economical and social. There is one group which emphasizes the importance of public housing, another which emphasizes the importance of private housing. Whatever their private status in society, the public housers speak for the cause of those who are economically and socially under-privileged; they emphasize the need of financial aid to those of insufficient incomes, so that they may enjoy the advantages of a wholesome environment, confident that thereby they will improve their position as constructive citizens. Private enterprisers resent the possible loss of slums and slum dwellers as a field of investment or speculation, and some profess a concern that public housing may prove to be coddling. But most public housers recognize the need of private enterprise in

slum clearance, and many, if not most, private enterprisers recognize the need of some amount of public housing. Still tolerance and cooperation are not as general as might be.

*Competition versus Cooperation*

Many of the issues which we have discussed have their origin in group rivalries; in conflicts which occur between the spirit of competition and the spirit of coöperation; in the failure of the individual or the group to realize what a large stake each has in the general welfare. This civilization of ours, for which we have fought a global war, has been achieved only through a certain reasonable and common sense balance between competition and coöperation. Competition has been the motive power, driving each individual forward; coöperation has been the steering gear, enabling the individual to keep on his side of the road, making it possible to avoid collisions, conflicts. Avoidance of collisions, of conflicts, has not always been possible, largely because of "road-hogs," because of lack of coöperation and a sense of responsibility as citizens. So voluntary coöperation has not been enough; rules of the road have been necessary to require active coöperation where the spirit of coöperation has not existed. Such is the universal experience of civilization. The slower driving "for the duration" has demonstrated the desirability of requiring slower speeds, of less competition and more coöperation. The principle is equally sound in normal times, and for all our activities, economical, social and political.

So in the matter of profits and wages, failure on the part of employers to gauge the importance of their stake in the general welfare, the general prosperity, has led too many to overestimate the efficacy of competition, impelled too many to ignore the normal right of their employees to a return which would enable them to enjoy a wholesome scale of living—one consistent with the total wealth and prosperity of the country. As stated by Eric A. Johnston, President of the United States Chamber of Commerce:

> "Another change from which we would not want to go back is the shift from the principle of big unit profit and low turnover to the new concept of lower and lower unit profit, coupled with bigger and bigger volume of sales. The business man, who thinks, has learned that this is not only the most socially acceptable way to operate a business, but the smartest way from the standpoint of his own self-interest.
>
> "Business has also come to appreciate the importance of a level of high wages, if based on high production. What profits it to manufacture goods if labor is so poorly paid it cannot buy the goods? And a well-paid worker is a happy, productive worker.
>
> "Meshing into this new business concept is recognition of the desirability of competition for all sectors of economy. Fifteen years ago some big business men thought monopolistic arrangements were essential to their successful operation. We know now that this is the sissy way of doing business. The fellow who has to hold a protective umbrella of monopoly over his head is a frightened man who ought to operate under the shelter of government, as in cartelized Germany."[3]

[3] An End to Reaction—A Charter for Business, *New York Times Magazine*, August 22, 1943, pp. 26 and 27.

Over and against the spirit of coöperation is the spirit of militancy. Militancy implies an enemy. To fight the enemy to a finish implies hate—little internecine wars, as in the Balkans. Militancy is found not only in the attitude between management and labor, but in the battle of words between many groups of "reformers" and the "vested interests." Militancy places the emphasis on points of disagreement and each militant group uncompromisingly demands complete concession to its views—an attitude usually associated with intolerance. Militancy breeds unwarranted mistrusts. Each militant is apt to see his objective illumined under a sanctifying halo and himself as a zealot worthy a martyr's crown, while on his opponent's head he sees the horns of Mephistophiles. No individual, no group, can rightly claim all the good on its side. Whatever is human is a mixture of good and bad. What we need is less of debate to sustain fixed opinions and more of open-minded discussion in quest of understanding and agreement. When conflicting groups do get together in this spirit, hate is apt to dissipate, distrust lessen, and there usually emerges some common ground for agreement and cooperation. All this is not to say that when willfully distorted facts are thrown into the public arena of discussion, they should not be vigorously assailed; but they should be assailed on a factual rather than emotional basis—if a meeting of minds and progress is what is wanted.

This principle holds as fully in official public life as in private life. As stated by Eric Johnston: "The construction of world peace must begin within the families and home towns".... "If our democracy is to survive—and survive it will—there can be no cynicism in public life." ..."the moral health of the nation is not what it should be."... "Because of the crisis in morals, we must cultivate tolerance—for everything but intolerance"... "We need higher standards of conduct in public life. The word 'Statesman' must replace the word 'politician.'"[4]

## Outstanding Housing Activities and Policies in the United States

*Various Early Federal Activities*

Since 1918 our Federal Government has in various ways participated in a movement to increase and improve the supply of houses for those various portions of the population which have been in need of better housing. The first federal participation was in World War I, to supply needed housing in those areas where industries were expanding at an advanced rate. Few questioned the wisdom of this move. The next move was the organization by President Hoover in 1929 of the President's Conference on Home Building and

[4] Eric Johnston, President of United States Chamber of Commerce, in a talk before the Council of Social Agencies, Washington, Mar. 25, 1944; reported in *New York Times* March 26, 1944.

Home Ownership, the deliberations of which reached the public through its twelve volumes of committee reports covering most aspects of low-cost housing, from Blighted Areas and Slums, Large Scale Operations, Industrial Decentralization, Business and Housing, to Household Management, and Kitchens. Out of this, as a natural outgrowth came the third move, that of putting into operation the recommendations of the Conference. This began with Knickerbocker Village in 1933, with a loan from RFC (*See pages 16 and 227*).

This last decade has witnessed the development of many federal agencies, attacking the problem from as many different angles: rural housing, in the Department of Agriculture; slum clearance, by the Reconstruction Finance Corporation (authorized earlier under the Hoover Administration), by the United States Housing Authority, and by the Federal Public Housing Authority; home-ownership by the Federal Housing Agency, and by the Federal Home Loan Bank Board (through the extension of the activities of home loan societies); the so-called "garden cities," through the Resettlement Administration; finally Defense and War housing, participated in by the army, the navy, by many of the previously mentioned agencies and by a number of new ones. From the experience of this wide field of activities there is much to be learned of the trend of government policies and of their soundness.[5]

All of the activities just listed fall logically into two groups: (1) federal aid to increase the opportunities for home-ownership, through loans made on easier terms and with better safeguards than had previously been available; (2) federal aid, through grants and subsidies, for the benefits of those who have no funds for home-ownership and not enough income to pay the going rent of decent housing, and so, if left to their own resources, are doomed to remain in a slum environment. *See Table I.*

The policy of Federal aid for home-ownership has been very generally approved by the public, though it has been opposed by certain groups in the mortgage business. But aid to those in the slums, involving subsidies, has from the start been questioned or opposed by various groups on various grounds. One group has opposed it on the ground of its alleged competition with private enterprise, another group on the ground of alleged unsound social and political trends. It is especially these latter alleged trends which we feel call for review and clarification. They cannot however be considered as a thing apart, but only in relation to the entire population, including those benefited by all the other agencies named, for each element of policy is woven into the fabric of the economic, social and political philosophy of the nation.

[5] A more detailed account of each agency and its accomplishments will be found in Appendix A, and a discussion of policies as related to standards and design in the chapter on Design.

TABLE I. THE SEVERAL FIELDS OF LOW-COST HOUSING, AND THE MAJOR FEDERAL AGENCIES ACTIVE IN THEM

A. *In the Field of Private Enterprise:*
- (a) For the urban population in the City and Suburbs
  - (1) The Federal Housing Administration
  - (2) The Building Savings and Loan Insurance Corporation
- (b) For the rural population:
  Department of Agriculture:
  - (1) The Farm Credit Administration
  - (2) The Farm Security Administration

B. *In the Field of Public or Subsidized Housing:*
- (a) For the urban population:
  - (1) The Federal Public Housing Authority, to which is assigned the functions of the late USHA and the temporary program of the Defense Housing (excepting that under FSA, which deals with those whose major occupation is farming.)
- (b) For the rural population:
  - (1) The Farm Security Administration,* particularly in the program for migratory farm workers.
  - (2) The Farm Credit Administration,* in housing which involves grants.
  - (3) The Federal Public Housing Authority (formerly USHA) in rural communities and scattered farmsteads.

* In the Department of Agriculture.

### *The Development of Policies in Urban Areas*
### *Public Housing*

Public Housing Policy began under PWA, which in its first phase (1933–35) operated by aiding local limited dividend companies, through loans at low interest rates and through grants. Accomplishments in this phase were very limited, because of the lack of the right to condemn essential property which might be held at exorbitant prices. In its second phase (1935–36) PWA operated through its Emergency Housing Corporation, which had the right to condemn and which controlled the design and construction of the projects. *For list of the projects under each phase see Table III, p. 35.*

The first comprehensive statement of public housing policies was not strictly official, though it was sponsored by the Honorable Harold Ickes, Secretary of the Interior and Administrator of PWA. To carry out the first phase of the program initiated by PWA, official housing organizations had been formed in each interested city, and before the second phase of PWA activities were begun these local and federal officials felt the need of a conference to discuss their problems in broad national terms. To this end the National Housing Association secured a fund to bring several experienced housing experts from Europe to study the problem in this country and advise as to the future course. Those chosen were Sir Raymond Unwin, who for several decades had been active in extensive private as well as public housing projects in England; Miss Alice J. Samuel, manager of one of the large housing estates of London: Ernst Kahn, economist, banker, and manager of Germany's outstanding housing activities at Frankfort-am-Main. These experts, with

Henry Wright, the gifted American city planner (of Sunnyside, Radburn and Chatham fame), and Mr. Ernest J. Bohn, chairman of the Housing Committee of the Cleveland City Council, visited a dozen or more cities to get first-hand information on the housing situation in its varying aspects. Following this tour they drafted a report and a summary, which later was presented to a conference, held in Baltimore in 1934, with some eighty representatives of the major economic and social groups interested in low-cost housing. The summary was critically and constructively discussed for four days, and as amended was published as "A Housing Program for the United States." *See Bibliography, p. 246.*

TABLE II. FEDERAL AGENCIES AIDING IN LOW-COST HOUSING (AS OF SEPT. 1944)

National Housing Agency*
(Headed by an Administrator)

| | | | |
|---|---|---|---|
| A. | *Federal Housing Adminstration*<br>(Headed by a Commissioner)<br>Includes former functions of:<br>Federal Housing Administrator<br>Federal Loan Administration | *Federal Home Loan Bank Administration*<br>(Headed by a Commissioner)<br>Includes former functions of:<br>Federal Home Loan Bank Board,<br>Federal Home Loan Bank System,<br>Federal Savings & Loan Insurance Corporation,<br>Federal Works Administration<br>Home Owner's Loan Corporation,<br>United States Housing Corporation (for liquidation) | *Federal Public Housing Authority*<br>(Headed by a Commissioner)<br>Includes former functions of:<br>United States Housing Authority,<br>Defense Homes Corporation,<br>Defense Public Housing (except on Army and Navy Reservations)**<br><br>Non-Farm Public Housing from Farm Security Administration<br>Co-ordinator of Defense Housing |
| B. | | *Department of Agriculture* | |
| | Farm Security Administration (Headed by an Administrator)<br>Major housing activities of the Department | Farm Credit Administration (Headed by a Governor) | Minor miscellaneous housing activities of the Department |
| C. | *War Department*—Corps of Engineers—Housing on Army Reservations. | | |
| D. | *Department of the Navy*—Bureau of Yards and Docks—Housing on Navy Reservations. | | |

* As reorganized Feb. 24, 1942. It is to terminate six months after the present emergency. See text p. 36.

** This type of Defense Housing was formerly done by Division of Defense Housing, Mutual Ownership Defense Housing Division, United States Housing, Federal Works Agency, Public Building Administration, War Department, Navy Department and Farm Security Administration.

Broadly speaking, the policies recommended were adopted by PWA and have been adhered to by the United States Housing Authority and its successor, the Federal Public Housing Authority. One important feature, however, was not carried out until 1942, and then only partially, namely the formation of "a permanent government housing agency, under which would be coördinated all sections dealing with housing activities with which the government may be associated." One of the stated purposes of the suggested agency was to assure continuity of policy. We will have more to say about this at the end of the chapter. The reorganization of 1942 is outlined in Table II.

We are here particularly interested in the policies which PWA adopted for the development and maintenance of large-scale projects. Some of the major and broader requirements were: a study of the population to be housed; the composition of each family, with the occupation of each individual; location of work, or school of each individual; provision for transportation, for shopping, for education and other cultural activities, such as places of worship; provision for outdoor and indoor recreation, including the pursuit of hobbies by adolescents and adults, accessibility of places of amusement such as cinemas. If schools were not already established in the general neighborhood, sites within the projects were set aside for the use of the school authorities. Playground areas were similarly handled when the park authorities were willing to coöperate.

Sites were required to be of sufficient size to permit of relatively open planning, with good light and outlook for all family units, with recreation spaces, trees, and the elimination, as far as possible, of the noise and danger of through traffic. Buildings varied from one and two-story low houses in small cities, to some walk-up apartments of not over four stories in large cities, and six-story combined walk-up and elevator apartments in New York. The minimum standards for the number, size and accessibility of rooms and for general safety were about those generally recognized by the public health authorities and existing legislation, but with some improvements. In principle, tenant selection was based on the need of the applicants and their reputation as good neighbors and on their ability to make regular payments of rents. In each project was an administrative office for the convenient payment of rent at frequent intervals, for other project business, and for arranging the use of spaces devoted to social activities. In all of this there was set a new pattern of home and neighborhood environment, for life within the family and within the neighborhood. Being something new in the American picture, they made an indelible impression on many minds, are still the symbol of public housing. They should not, however, be confused with the more recent and far more numerous USHA and FPHA projects built

under somewhat modified policies. *See Tables III and IV, pp. 35–37.* Within the projects, lots for churches have not as yet been provided, for the obvious reason that the number of denominations is so large, and discrimination in favor of a few might be difficult. In cases where the population to be housed is known to be predominantly of one or a few denominations, making lots available to them by purchase would seem to be justifiable. Ultimately, with the total redevelopment of our cities, provision must be made for all. For the present, however, few projects are so large as to make it a hardship to go to a church bordering the project.

There was criticism of the standards of design, standards which resulted in costs that required rents higher than could commonly be paid by those in the slums, thus reducing the population to a very thin upper stratum of those in substandard housing. The building of shopping centers, etc. brought criticism and opposition from competing commercial groups.

Under the Wagner-Steagall Act, passed late in 1939, the United States Housing Authority became the successor to the Housing Division of PWA. To meet the criticism of the work of PWA, the act set upper limits to the cost per room of family units and to the maximum income of the tenants admitted, and only occasionally was provision made for buildings of a commercial nature, such as shops. To reduce costs and the rents based on them, many economies were introduced in design and method of construction, thus broadening somewhat the stratum of the population housed. But, under the subsidy regulations which prevailed up to the end of 1940, rents were kept within a very limited range. They did, however, reach lower strata of incomes than did PWA.

TABLE III. EARLIER HOUSING PROJECTS AIDED WITH FEDERAL LOANS OR GRANTS—1934–1936

Note: These earlier projects done with federal aid should not be confused with those built since 1937 with aid of USHA, of which there are many hundreds throughout the country.

*Limited Dividend Projects*

A. Under Reconstruction Finance Corporation (Partial local tax remittance as only direct subsidy)
Knickerbocker Village, N. Y.

B. Under PWA Housing Division (30 per cent federal grant) 1934–1935
Alta Vista, Va. (20 miles south of Lynchburg)
Euclid, Ohio
Hillside Homes, Bronx, N. Y. City
Boulevard Gardens, Queens, N. Y. City
Carl Mackley Houses, Phila. (Juniata Park)
Boylan, Raleigh, N. C.
Neighborhood Garden, St. Louis, Mo.

*Subsidized Housing, See Note above*

C. PWA Federal Housing Projects—1935–1936
Federal and local subsidy—originally built and owned by Public Works Emergency Housing Corporation; later transferred to USHA and by whom most have been sold to the local housing authorities.

Atlanta, Ga.
Techwood Homes
University Homes (Negroes)
Atlantic City, N. J.
Stanley S. Holmes Village
Birmingham, Ala.
Southfield (Negroes)
Boston, Mass.
Old Harbor Village
Buffalo, N. Y.
Kenfield
Cambridge, Mass.
New Towne Court
Charleston, S. C.
Meeting St. Manor & Cooper River Court
Chicago, Ill.
Jane Addams Houses
Julia Lathrop Homes
Trumbull Park Homes
Cincinnati, Ohio
Laurel Homes
Cleveland, Ohio
Cedar Central
Outhwaite Homes
Lakeview Terrace
Columbia, S. C.
University Terrace
Dallas, Texas
Cedar Springs Place
Detroit, Mich.
Brewster
Parkside
Enid, Okla.
Cherokee Terrace
Evansville, Ill.
Lincoln Gardens
Indianapolis, Ind.
Lockfield Garden Apartment
Jacksonville, Fla.
Durkeeville
Lackawanna, N. Y.
Baker Homes
Lexington, Ky.
Blue Grass Park, Aspendale
Louisville, Ky.
LaSalle Place
College Court
Memphis, Tenn.
Dixie Homes
Lauderdale Courts
Miami, Fla.
Liberty Square
Milwaukee, Wis.
Parklawn
Minneapolis, Minn.
Summer Field Homes
Montgomery, Ala.
Riverside Heights
Wm. B. Patterson Courts
Nashville, Tenn.
Cheatham Place
Andrew Jackson Courts
New York, N. Y.
Williamsburg Houses
Harlem River Houses (Negroes)
Oklahoma City, Okla.
Will Rogers Court
Omaha, Neb.
Logan Tontenelle Homes
Philadelphia, Penn.
Hill Creek
Schenectady, N. Y.
Shonower Village
Stamford, Conn.
Fairfield Court
Toledo, Ohio
Brand Whitlock Homes
Washington, D. C.
Langston
Wayne, Penn.
Highland Homes
Puerto Rico, W. I.
Cajuas Caserio La Granjo
San Juan, Caserio Mirapalmeras
Virgin Islands, W. I.
Basin Triangle
Marley Homes
H. H. Berg Homes

One of the last acts of USHA, before turning its work over to the FPHA, was to recommend to local housing authorities that they adopt a wider range of subsidies, so as to make it possible for families of lower and of higher incomes to live in the projects. This had long been the practice of the Alley Dwelling Authority of the District of Columbia (now the National Capital authority), in whose projects families pay rent according to their means, from next to nothing to the economic rent, (*i.e.*, at cost). *See section on Family Budgets and Subsidies, p. 138.*

Another important change in policy under the Act of 1937 was greater decentralization through a system of local housing authorities, which assume the

initiative in establishing the local housing program, and which, on behalf of the city, build and operate the projects. As pioneers in a new field, most local authorities tended to lean heavily on USHA. Under most of the state acts from which they derive their authority, their work need not, however, be confined to subsidized housing, but could be expanded to include the entire range of low-cost housing. With the whole problem new and with new techniques to be worked out, it is probably just as well that in the initial years the authorities limited their work to the narrower field. We will discuss this further a little later in our suggestion for various changes needed in the housing program.

With the reorganization of all government housing agencies early in 1942, the Federal Public Housing Authority, which replaced USHA, promptly moved to establish regional offices, with the objective of speeding up the preliminary work and the subsequent routine work between the local authorities and the Federal authorities and also, more significantly, of increasing decentralization, of encouraging a closer study of local needs and desires, thus incidentally helping to break down the uniformity of design which too generally prevailed under USHA administration from Washington. FPHA has also declared that it will be its policy to use every available means for extending upward and downward the range of incomes eligible for public housing projects and seemingly has implied the inclusion of mutual ownership housing.

Unfortunately a clean-cut study of the social and political policies of public housing is hampered by the fact that integrated with such policies have been policies to meet special emergencies. Thus the chief argument for PWA housing was its ability to create employment, and also this was a stated objective and a strong argument for the support of USHA. So to some extent the social and political policies have been compromised and confused (principally because of haste for reëmployment); nevertheless there has been, since 1934, a gradual buildup of policies based on permanent issues.

Normal activity of public housing, as well as private, came to rest with the emergency economy which set in when our production was stepped up to meet the threat of the Axis powers. So in discussing the policies of public housing we should confine ourselves to the more nearly normal period of 1934 to 1940, except as the policies of other agencies and the experience of other countries may throw light on the trends and the results to be expected of the more normal policies. Agencies, other than those in the field of public housing, whose experience enables us to better understand the policies of public housing, are the Federal Housing Agency in both the field of large-scale rental housing, and of homeownership; the housing in the Department of Agriculture; Subsistence Homestead and Defense Housing. Needless to say, the work of each of these agencies, as an aid to increasing the supply of private housing, is of great interest in itself. *See Table IV, and Appendix A, p. 225.*

*Private Housing under FHA*

The projects for *rental* housing for which FHA-insured loans were for the most part on a large scale, located at the edge of the city or in the open suburbs. The figures show on the one hand the limitations of private enterprise in supplying housing for rent to relatively low-income groups, and on the other hand the extreme caution observed by USHA in not encroaching on the field of private enterprise. Thus FHA catered to incomes from about $2200 to $10,000 and upward according to the project. In all these projects those renters with incomes from $2,200 to $3,000 were but a small percentage of the total in that income group, while in the income group from $4,600 to $7,500 FHA renters were a large percentage (possibly a third) of the total income group. The average rent per room was $14.70. Contrasting with these figures, in USHA projects incomes were mostly over $500 and under $1,200, with the largest proportion in the $500 to $800 group. Incomes ran as high as $2,200 only in New York City and possibly a few other very large cities, and even in those cities they were the exception. The above figures are based on the overall national picture and varied widely from locality to locality, particularly as between the North and the South.

The gap between the field of FHA and USHA constitutes part of what we have termed the No Man's Land of housing, the remainder of the areas being those occupied by families with incomes too small to make them eligible for USHA projects. The total population in No Man's Land I estimate to be 16 per cent of our total population, against the 36 per cent which lives in sub-standard housing of all sorts—all this in the urban areas. *See Graph IX, p. 142.* The large extent of No Man's Land indicates a greater solicitude for protecting financial investments than for the lives of the people living in sub-standard housing, and it also indicates a need of a more comprehensive housing policy.

Of the houses insured by FHA in the field of *home ownership*, the number of families with incomes as low as $500 was negligibly small, while those with incomes around $2000 were about 12 per cent of all families in that income group; those with about $3000 were 18 per cent; those with $4000 about 13 per cent of this income group. Those with incomes of from $1500 to $2000 were the only ones who were at all likely to be in No Man's Land.

In the low-cost housing for home ownership insured by FHA, there is one item of policy which calls for comment at this point—others are discussed in the Chapter on Design. Once the projector of a project sold out to individual owners there were no FHA requirements for maintaining the original standard of design or of neighborhood cohesion. In the original

## TABLE IV. NUMBER OF HOUSING UNITS PRODUCED WITH AID OF FEDERAL AGENCIES

A. Number of Permanent Dwelling Units, New or Renovated Produced With the Aid of Federal Agencies From 1930 to December 31, 1941 (Exclusive of Defense Housing which is Temporary or on Military Reservations)[a]

| Agency | With Direct Subsidies | | With Loans | |
|---|---|---|---|---|
| | Completed | Under Way | Completed | Under Way[b] |
| *Agriculture, Dep't. of—* | | | | |
| FCA 1933–1940 | | | 600 | |
| Homesteads 1933–35 | 3,167 | | | |
| Homesteads FERA 1933–35 | 1,323 | | | |
| Homesteads FERA Subsistence 1933–35 | 1,825 | | | |
| Greenbelt Towns (Originally FA) | 2,258 | | | 1,000 |
| FSA—Homesteads | 15,700 | | | |
| FSA—Tenant Homes (B. J. Act) | | | | |
| Repaired | | | 11,822 | 6,933 |
| New | | | 11,162 | |
| FSA Migratory Workers[c] | 13,674 | | | |
| Total | 37,947 | | 23,584 | 7,933 |
| RFC—1933–1934 | | | 1,593 | |
| PWA (Now under FPHA) | 21,445 | | | |
| USHA Slum Clearance (1934–41) | 100,520 | 75,744 | | |
| USHA Lanham Act | 14,578 | 14,814 | | |
| USHA Public Law 671 | 6,344 | | | |
| HOLC (Renovated Bldgs. only)[d] | | | 185,883 | |
| FHA—Title I: | | | | |
| FHA Alterations | | | 3,308,000 | |
| FHA New (Costing under $2500) | | | 22,000 | |
| FHA—Title II: | | | | |
| S.203, Homes $5,000 to $20,000 | | | 636,000 | 139,422 |
| S.207, Multifamily | | | 39,000 | |
| FHA—Title VI. War Housing, Multifamily from $2622 to $4000 per unit | | | | 3,778 (100,327)[e] |
| Totals | 180,834 | 90,558 | 4,216,060 | 151,133 |
| Grand total | | | | 4,638,585 |

[a] For further description of work of each agency see Appendix A.
[b] Includes some in planning stage.
[c] Migratory camps for Defense are assumed to be self-sustaining; others are assumed to require some subsidy. See p. 239.
[d] Buildings foreclosed and later sold.
[e] Additional number actually completed by June 30, 1942. Title VI did not go into effect until March 28, 1941.

B. War Housing Units Completed from January 1, 1942 to June 30, 1944[a]

| | *Units* | | |
|---|---|---|---|
| Privately Financed | 809,000 | Family Units | 1,256,000 |
| Publicly Financed: | | For Single Persons | 143,000 |
| Through Local Authorities | 300,000 | Stop-gap | 46,000 |
| Through Others | 336,000 | | |
| As of April 30, 1944 | 1,445,000 | | 1,445,000 |
| | | As of June 30, 1944 | 1,627,290[b] |

[a] From data by Thomas Blandford, NAHO Year Book, 1944, p. 22.
[b] Letter from NHA, August 29, 1944.

C. All Permanent Units Completed Since 1930 and Those Programmed

| | | |
|---|---|---|
| Grand Total from Table A. | | 4,638,585 |
| Less units in Dept. of Agriculture | 69,931 | |
| Less units underway as of Jan. 1942 | 141,691 | 211,622 |
| Urban Housing Completed as of Jan. 1, 1942 | | 4,426,963 |
| Urban Housing from Table B—Jan., 1942 to June, 1944 | | 1,627,290 |
| Total of Permanent & Temporary Urban Units Since 1930. | | 6,054,253 |
| Less temporary units included in Table B (exclusive of 72,000 demountable units) | | 671,290 |
| Total of Permanent Urban Units Completed | | 5,382,963 |
| Program of June 30, 1944, additional: | | |
| Privately financed: | 1,033,771 | |
| Publicly financed: | 806,788 | 1,840,559 |
| Total Completed and Programmed | | 7,223,522 |

design there may have been some charm in the form of each house and its relation to adjoining houses, some charm in the color scheme or in the planting arrangement. But each individual might make an incongruous addition, or when next he painted, might spoil the general color scheme, or he might introduce a bizarre note in the planting. Furthermore few such projects provided playground or any indoor community facilities. In short no foundation was laid for the development of neighborhood group interests. Thus some individuals will keep their property up, some will let theirs run down; it will be each for himself. Under these circumstances, judging from the past, we may expect that with the passing of time neighborhood qualities will deteriorate rather than improve. A requirement at the outset for some form of neighborhood organization would correct this danger. The greater assurance of stability thus achieved would justify larger loans, involving smaller payments for retiring the loan. (*See end of the following paragraph on loans by the Department of Agriculture.*) If this were accompanied by even a slight reduction in the rate of interest and slightly longer loans it would help appreciably in reducing the area of No Man's Land.

*The Development of Policies In Rural Areas*

In the Department of Agriculture aids to improved housing have been conceived as part of an improved farm economy—the farm work and the worker's home seen as parts of the same problem. Generally the objective was "to help get these people off the relief rolls and become permanently self-supporting." Proceeding along their traditional lines of scientific investigation, the aim in the Department has been to produce a simple and efficient house for the family life and the large amount of food preparation that goes on in and about the farm kitchen, both that prepared for summer and winter home consumption and some that is prepared for market. The standard plans provided for a supply of pure water piped in to the house and for a sanitary disposal of sewage, often by means of properly designed privies. There was provision for a future bathroom, but, because of the disproportionate expense involved in fixtures connected with a water supply and a sewage disposal system, they are not commonly part of the original undertaking. In areas where there were as many as 50 houses to be built in a radius of 25 miles, great economies were made possible by establishing a central saw mill where all lumber was cut to the required lengths and parts of the building pre-assembled for transportation by truck. Most of this work was in the South where the average cost of a house was $1,313. With a 30 year loan and interest at 3 per cent, the houses cost the owner $56 a year. This serves to illustrate the wider field possible for home-ownership under FHA, if the amortization were for a longer period and the interest at somewhat lower rates.

Those 350,000 migrant families described in *Grapes of Wrath* presented a new problem, the solution of which is a striking example of economic, social and political planning. The essence of the problem was to provide shelter for a large group of the population which had been driven out of their home by inundations of wind-borne dust, and who, in search of work had migrated to other states where they were not welcomed. Their plight was not of their making. It had its origin in an emergency measure during World War I, in the establishing of wheat farms in regions where the removal of the natural cover of vegetation laid the soil open to wind erosion. In hope of some better break of fortune farmers stuck to their farms until they were about destitute. When these destitute migrants swarmed in on small communities in other states, it is only natural that there was fear that the newcomers would become wards of the local community and a menace to the general standard of living. County and State authorities saw the same picture. Since the trouble originated in a national policy and had developed into a conflict of interests of people of different states, it seems logical and inevitable that the Federal Government should find the solution.

The solution found was based on the ability of the workers to earn a living, largely in harvesting extensive crops of fruits and vegetables on the Pacific Coast, where most of them had migrated. The type of shelter provided was a highly specialized one, designed to provide for the progressive migration northward as the crops ripened. Up to the summer of 1940, twenty-five permanent camps had been built for 5800 families, and several mobile camps travelled with the migrants from area to area. Since the emergency period, the camps have greatly increased in number and in size and in their technical organization. *See p. 238, Plates XLV, p. 205, XLVI, p. 206.* The camps were made as simple and economical as was consistent with hygienic living. Rents were set at rates within the reach of the workers' earnings, the Farm Security Administration (which now handles about all the housing of the Department of Agriculture) presumably taking a loss, if necessary. The migrants were encouraged to settle down, and to this end in various camps a small proportion of permanent cottages were built, each with a subsistence garden. In addition there were a few two story apartments of light construction. These permanent groups are, in the judgment of this writer, the most efficient, the most constructive, and altogether the most satisfactory solution of any housing problem in this country, and possibly in any country. A cost of $1459 for the average house, and $1649 for the apartment units attest the economy. Among the sanitary precautions was a mobile first aid station and an isolation tent—the latter being a safeguard to the surrounding community as well as to the workers.

Thus the growers have their workers and the workers have jobs and wholesome shelter. But despite these advantages and the fact that the migrants were

in no way responsible for the situation, there were some who objected to "Government interference," without which we might have seen a repetition of the experience of the immigrants in New York City in the 1870's.

In the rural areas was another type of housing, subsistence homesteads, fostered by several agencies in different departments of government. The Federal Emergency Reconstruction Administration early in the financial depression of the 1930's undertook to make it possible for industrial workers to improve their way of living and to stretch their incomes by having a home garden and maybe by keeping poultry or other small livestock. The plan was to build the homesteads in groups in a rural area adjacent to the city, thus gaining the economy of cheap land and of large scale operation, and the advantages of community coöperation. But it proved difficult to get sponsors. City officials were opposed to moving the workers out of their city, city landlords foresaw vacancies, and the people in the rural areas saw no gain for themselves. In the days ahead this experience may prove of interest in the promotion of urban decentralization. Another homestead program, to rehabilitate miners thrown out of work by the closing of coal mines in the Southern Appalachian Mountains, was carried out in the Department of the Interior. Still another program for communities with rural occupations was initiated by the Resettlement Administration and was eventually inherited by FSA which has continued this type of homestead in modified form. None of these attained the success of those later developed in Germany. (*See p. 93.*)

The so-called "Garden Cities" were built by the Resettlement Administration, a short-lived organization independent of any other government department. Greenbelt, near Washington (*See Plate XLVII, p. 207*), Greenhills, near Cincinnati, and Greendale, near Milwaukee, each had an initial population of about 1000 families, which might extend to 3000 without increasing the general facilities. These were in fact *garden suburbs* for the adjoining cities, not "Garden Cities," which are approximately independent cities, with their own industries and about all the other activities which characterize a city. They are, however, surrounded by that "greenbelt" of open country which is a feature of the garden cities of England (*See p. 58*). This was another program which was in part initiated to create employment, to make jobs, with the result that costs ran so high that it was necessary to write off a large portion of them before establishing a scale of rents. Another weakness was that the developments were planned for families all at about the same economic level. Greenbelt was for modest-salaried white-collar Government employees in Washington. However, during World War II other 1000-family units have been built for a lower income group. RA came to an end in the reorganization of 1942, its work being taken over by the Department of Agriculture.

*Defense and War Housing*

Several phases of Defense Housing bear on the national policy and deserve attention. In the broad picture, speed lay behind the method and policies adopted. For speed the Army and Navy established their own designing organizations; special designing agencies were set up to house essential civilian war workers. In areas where there was reasonable expectation that the increase in population due to war work, could be permanently absorbed and could pay commercial rents, there private enterprise was encouraged to do the job; where large industries were established in sparsely settled areas, there some Federal agency took over, usually with temporary housing, some of it demountable—much of it done by FSA. One of the most significant types of housing done was by the Mutual Ownership Housing Division of the Federal Works Administration, a type of financing which holds much promise for helping to reduce the extent of No Man's Land.

Another significant phase of Defense Housing and of war activities in general is the recognition by the Government of the principle that *the greatest asset of the nation is its people*, not only those in the Army, but those in all essential undertakings and occupations, and that *these people must be kept at the maximum of effieiency*. Housing has been recognized as an essential means to that end, so that in many cases the Government has found it necessary to itself enter into production.

Thus for certain types of war housing in industrial areas special agencies were organized, largely under the Federal Works Administration. It is interesting to note that the best work under FWA was designed by architects in private practice, and that the USHA through the local housing authorities and the normal civilian channels got excellent results in less time than all other organizations—a repetition of the experience of World War I which we noted in an earlier chapter (*p. 12*). Where production was left to private enterprise the results were not always so good. The normal incentive for private enterprise is profit; so it happened that in some cases housing designed for essential workers was rented to non-essential workers, at higher rents than the essential workers could pay—and this despite the fact that Federal priorities and possibly Federal financial aid was granted for the benefit of the essential workers and only because they were essential. This is not a reflection on *all* private enterprise, but it does indicate its limitations for dependability.

Unfortunately, to get quick results, temporary expediency often took priority over long-range policies. Scarcity of the more durable materials often made necessary light wooden construction and short-lived plumbing; the water supply and sewage disposal was often not completed for use for months after the completion of the buildings. So when you are thinking of permanent public housing, make sure you are not looking at Defense Housing. Out of this hasty

procedure one good precedent was established—antiquated building codes were brushed aside.

The foregoing is only an outline of certain of the many Government housing agencies, but not all. A complete account of both the policies and accomplishments of all agencies will be found in Appendix A, *p. 225, see also Table IV, p. 37.* At this point, however, the account needs to be supplemented by a close-up view of the most significant output of all, the permanent large-scale public housing projects, which in addition to a new physical environment offer a new social environment. Does large-scale housing tend to become "institutional," and, if so, is such an institution desirable? Is there justification for it? These questions can best be answered by tracing the history of the large-scale project and its methods of management.

### The Large-Scale Public Housing Project, Its Origin, and Economic Advantages

In the story of housing in New York City we traced the gradual growth in the size of housing developments. Starting from the 25 foot lot, we saw how in the 1850's two tenements were built, each on a much larger lot, each a definite advance over previous designs, the first housing 100 families, the second 180, yet both were soon overshadowed by and absorbed into the surrounding slums; how improved housing for the working class was built by A. T. White in Brooklyn in 1876 on a larger scale and with more open planning and how it maintained its own neighborhood standards; how for his next project Mr. White acquired an entire block, leaving the center of the block as an open park; and how before the end of that century the block came to be recognized as the minimum of good planning for neighborhood control, even in congested Manhattan. We saw how the Government housing agencies of World War I adopted the principles of large-scale planning which had been developed in public housing in England; how in the post-war period, when the automobile had added much to the congestion and noise of traffic, the super-block again came to be recognized as the minimum efficient area for development, even in Manhattan where the possibilities for the re-arrangement of the street pattern, so as to eliminate through traffic within the project, were especially important; and how these same advantages were also recognized by the President's Conference on Home Building and Home Ownership of 1929, and by the subsequent housing agencies. So much for the origin of the policy of large-scale projects.

The economic advantages of large projects we point out in detail in the chapter on The Cost of Housing, *p. 171.* Suffice it here to summarize: Economy in first cost of land and in building operations; economy in maintenance and general management, made possible in part by an office on the site from which there is a ready supervision of janitors and full-time repair men, and where rents can be conveniently paid at frequent intervals, thus lessening the likelihood of arrears and consequent changes of tenants and redecorating for new tenants; tenant coöperation in maintenance and redecoration; the great economy of wholesale purchase of public utilities.[6] All these economies are, of course, reflected in the rents, making it possible for families of lower incomes to live in the project, or making it possible to reduce the subsidy.

As to the origin of social activities in these projects, these stem from the methods adopted in the pioneer semi-philanthropic housing in London, by rent collectors trained in social work, methods in which the attitude of the ruthless mercenary rent collector gave way to a more humanized and understanding approach —eviction was not resorted to until the cause of arrears and possible measures for removing the cause were investigated; they stem from the Mothers' Club, the Girls' Club, the Boys' Club, and the Fathers' Club, which were established in the nearby settlements or within the housing estates. For the inclusion of these and other special facilities within the projects there is also a precedent in the industrial housing estates in Northern England, beginning even before Bourneville of 1879. *See p. 58, Plate XVIII, p. 68.*

In considering the scattered large-scale projects so far built in the United States, it is important to bear in mind the fact that each project is just one step toward the general rehabilitation of the entire city, a process which may require several decades. In our first step of this transition, some have seen these housing projects as isolated units, enjoying special privileges and out of harmony with the city as a whole. For the time being it is true that projects stand out like oases in a desert; but one must be without imagination or hope or courage not to see in them a promise for an almost unbelievably better future for our cities. To appreciate the feasibility of such a future one has only to look at the complete transformation of the city of Amsterdam by this very method, within one generation, culling out all the bad housing and substituting only the most appropriate. Have we Americans fewer resources, or less enterprise, or less courage than the Dutch?

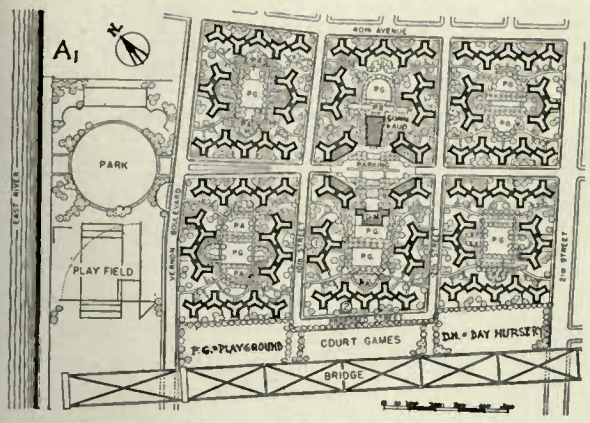
#### *Appraisal of Social and Political Activities*

We are not ready to appraise the social features and possible political implications in large-scale public housing until we have considered the present economic and social conditions of the population in the slums, for whom public housing is built. As we have previously pointed out and will show in more detail in the Chapter on Environment, this population is not all of a kind; it is stratified economically and socially; it is not fixed—families rise from it and sink into it; there are small families and large, families of several generations and, in the larger cities, families of many nationali-

(*Text continued on p. 47.*)

[6] The Memphis Housing Authority reports a saving of half the estimated maintenance cost brought about by tenant maintenance. FPHA estimates an average annual saving of $18 per family unit. See "Seven Myths of Housing," op. cit., p. 161–162.

# PLATE X. USHA AND FPHA HOUSING IN NORTHERLY CLIMATES. 2. MID-EAST





A. 1939. New York, Queensbridge houses, USHA. Coverage 25%, density 290. Arch't. F. R. Ballard, et al. B. Washington, Fort Dupont dwellings, NCHA, USHA. Coverage 21%, density 89. Illustrates various methods of obtaining pleasing variety, by varying the set-back of the buildings, the height of buildings and their color, also effective use of limited but carefully studied detail. C. Highland dwellings,. NCHA. FPHA. Domestic quality achieved by careful study of proportions and details. Arch't. L. Justement.




*McLaughlin*











A. Chicago. Ida B. Wells homes. 47.5 acres, 1662 units, coverage 23%. 3- and 4-story apts., 2 story row houses, 2- and 3-story combinations.

B. Cleveland. Valley View homes. 19.2 acres, 582 units, coverage 26%. 2-story row houses and flats.

C. Toledo, O. Chas. F. Weiler homes. 17.4 acres, 384 units, coverage 18%. 2-story row houses and flats.

D. Louisville. East End Homes. 2-3 story apts.

E. Covington, Ky. Latonia Terrace. 2-story row houses.

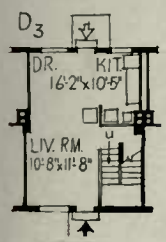
F. Cincinnati. Winton Terrace. 19.2 acres, 502 units, coverage 26% 1-2 story row houses and flats.

# PLATE XII. USHA IN SOUTHERLY CLIMATES

A. Knoxville, Tenn. College Heights. Coverage 17%, density 75. Arch'ts. Bauman & Bauman.







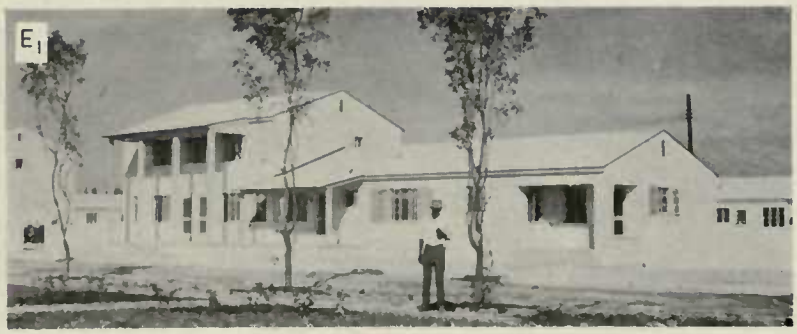

B. Athens, Ga. Parkview homes. Coverage 16.6%, density 75. Arch'ts. Merry and Parsons.

C. New Orleans, La. $C_1$. St. Thomas Street. Coverage 22%, density 122.5. Arch'ts. A. Owens & H. T. Underwood. $C_2$. Mangnolia Street. Coverage 23%, density 130. Arch'ts. M. H. Goldstein and Associates.

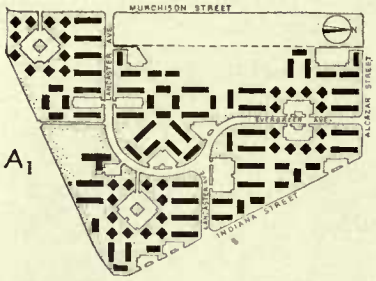
D. Jacksonville, Fla. Brentwood Park. Coverage 14%, density 42. 1–2 story row houses. Arch'ts. M. C. Greely and Associates.

E. Miami, Fla. Edison Courts. Coverage 18.4%, density 40. Black patches on roof are glass covered solar heating units for hot water heating; the hot water tanks take the form of chimneys. Arch'ts. H. D. Stewart et al.

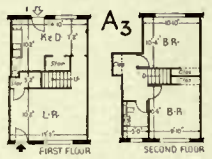




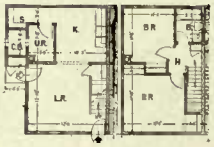
# PLATE XIII. USHA AND FWA DEFENSE AND WAR HOUSING, 1942

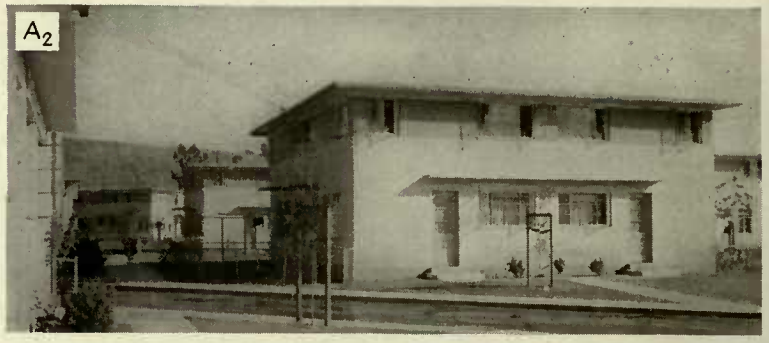


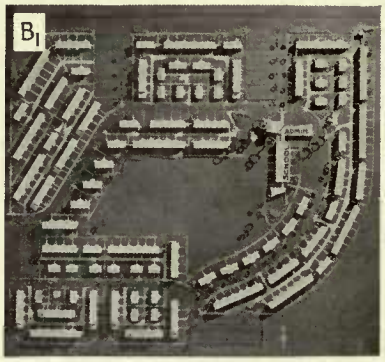
A1

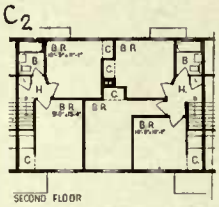


A3

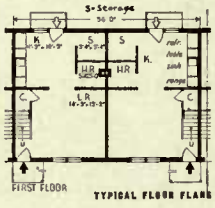

B4


A2


B1

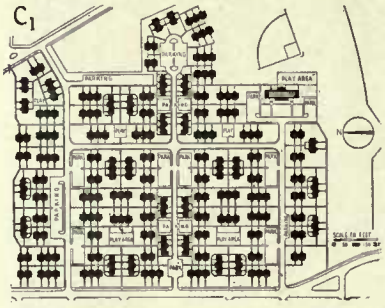


C2





B2


C1


B3

Note: A, B, and C are on flat sites, permitting geometrical designs, in which monotony is avoided by various devices in plan, by varying the color of buildings, to which judicious planting will add. Use of wood due to war.

A. Romona Gardens, Los Angeles, Cal. Uoder USHA. Note 2nd story windows extending to roof slab. Arch't. Lloyd Wright, et al.

B. Kramer homes, Centerline, Mich. Under USHA. 500 units, coverage 14.8%. Arch'ts. Eliel and Eero Saarinen, R. Swanson.

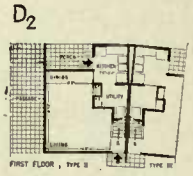
C. Euclid homes, Euclid, Ohio. Cleveland Metro. H. A., under USHA. 500 units, coverage 11.5%. Rectilinear site plan without monotony. Arch't. R. W. Dickerson, et. al. Site engineer, A. D. Taylor.

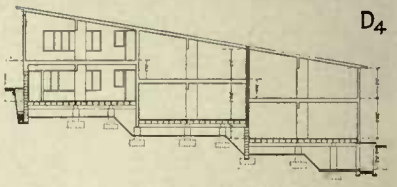
D. Monongahela Heights, Pa. Allegheny County H. A., under FWA. 29 acres, 342 units. Plan and model show good use of a rugged site. The promise in the plan is not seen in the view, because of lack of landscaping and the monotony of the long rows in the background, which might have been broken by occasional 3-story buildings.


C3


D1


D3

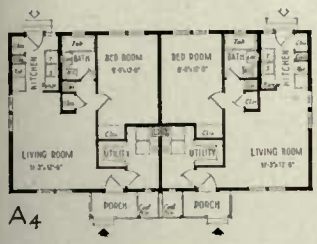

D2


D4

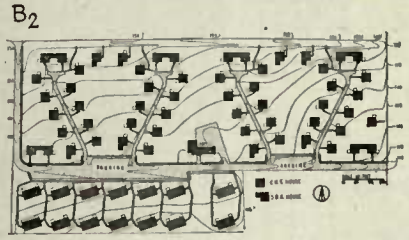

D5

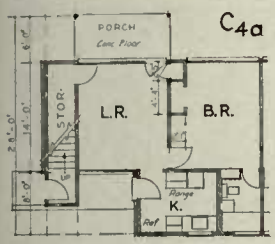
# PLATE XIV. FWA DEFENSE AND WAR HOUSING. 1941-1942

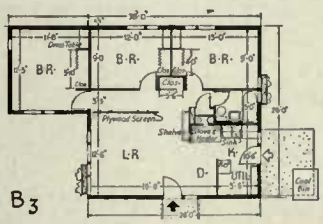
Note: This housing, for the military or essential war workers, is permanent but affected by rigorous priorities.

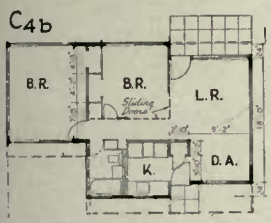


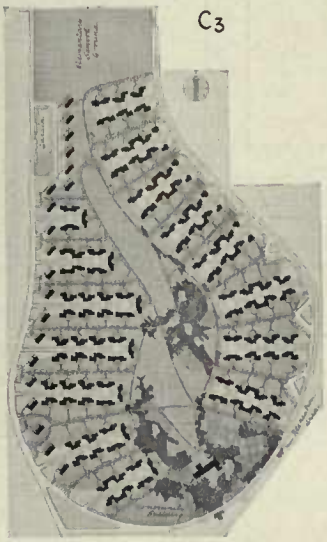


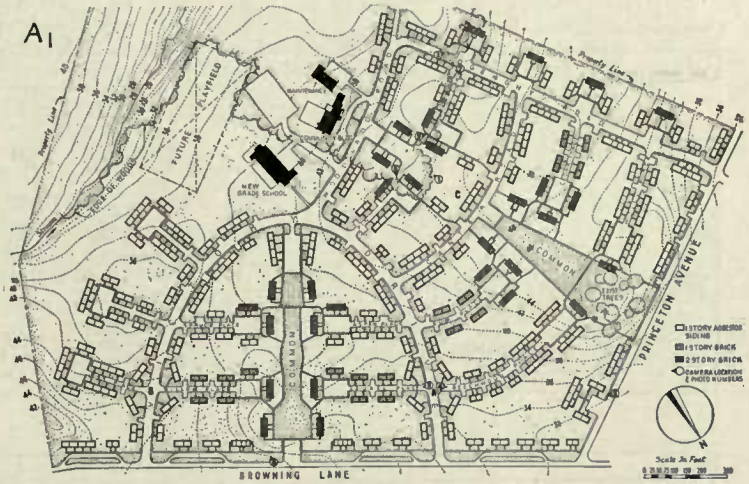






A. Bellmawr, New Jersey; $A_4$. Detail of porch and coal bin. Arch'ts. Mayer and Whittlesey, J. N. Hettel.

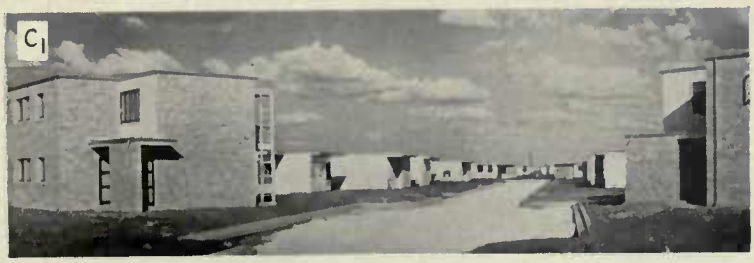
B. Windsor Locks, Conn. "Bradley Field". $B_3$. Heating is by air heated by a water-back in the range and forced through duets in roof space. $B_4$. Structural awning.

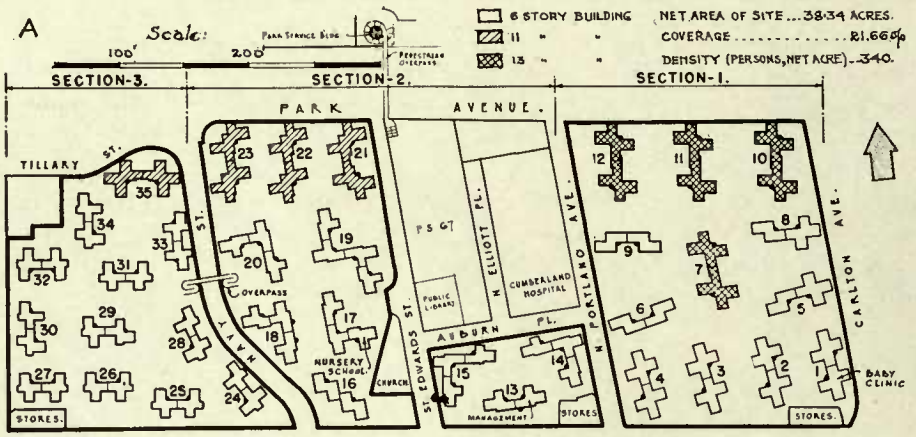
C. Grand Prairie, Texas. Avion Park, for mutual ownership; two thirds of houses are of one-story with two bedrooms. $C_3$. Note culs-de-sac about central park. $C_5$. Note prefabricated ceiling panels. $C_6$. Note sliding partitions—*see plan*.

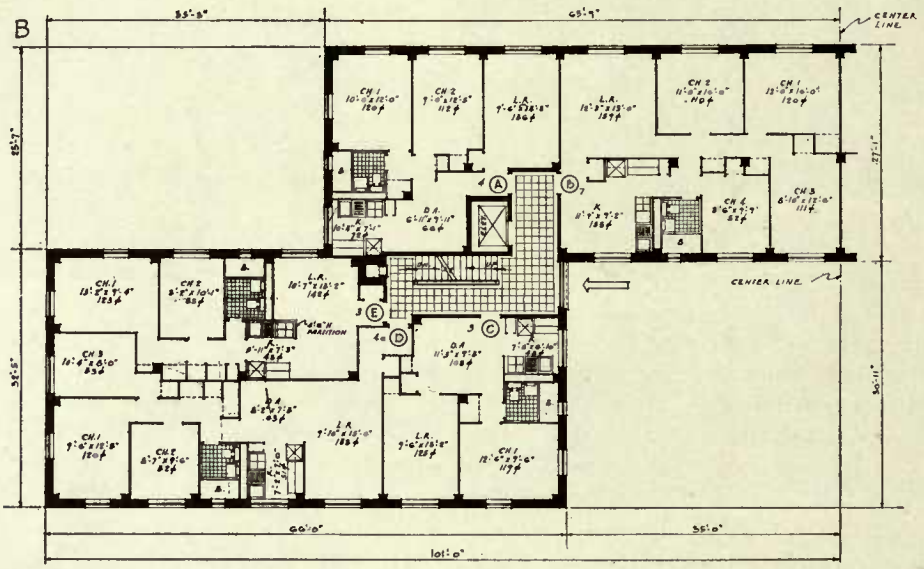











1943. Fort Greene Housing, Brooklyn. New York City's largest public project, financed with the aid of a loan of $19,600,000.00 from the State Housing Authority, secured by 50 year bonds (sold @ 1.725%). For a population of 13,040, in 3,501 units, in buildings of 6, 11, and 13 stories. Coverage 19%, density 334. Stores are in 1-story buildings. Note: the extensive use of interior dining alcoves ("D.A." on B.); pedestrian over-passes on Navy Street and on Park Avenue; nursery school and baby clinic.

Size and Distribution of Units.

| Persons per apartment | 1 | 2 | 3 | 4 | 4A | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Rooms per apartment | 1 | 2 | 3 | 4 | 5 | 5 | 5 | 6 | 7 | 8 |
| Number of apartments | 54 | 441 | 1125 | 753 | 438 | 345 | 217 | 102 | 10 | 16 |


ties; there are single folk, male and female, young and old. They are in the slums for different reasons—a large portion because they were born there; some because of a lack of education and familiarity with American customs; some because of physical and mental handicaps; some because of an adverse turn of fortune beyond their control—general unemployment, sickness or death in the family. Concurrent with these causes and often inherent in them are incomes insufficient to pay for better housing at going commercial rents. But whatever the cause, once there, it is not easy to top the hurdles and barriers about them—details of which are given in the chapter on Environment.

To ask which came first, the slums or the slum population is, as we have previously stated, beside the point, though the question might be answered by pointing out that for the immigrants who came to New York there was not an adequate supply of decent housing and that what housing there was of necessity became crowded beyond decency, whatever the aspiration for decency which the immigrant may have had. It *is* to the point that ninety per cent of all adults from the slums and practically one hundred per cent of such children respond to the improved surroundings of public housing. Such is the experience in England and those other countries of northern Europe where to supply good housing has long been a national policy.[7] The ultimate response to such an environment is shown in more orderly lives, self-respect, ambition, and efficiency. There is abundant reason for believing that this response is in no small degree due to that type of life which brings people together in common interests and forms the basis of an *esprit de corps* and pride of project, out of which arises an increased civic pride. They make possible the type of small community which is the "seed-bed of civilization," as Arthur E. Morgan puts it. *See p. 121.* Such is the testimony of experience.

Then there is the testimony of the scientists—biologists, geneticists, psychologists—as to the great influence of environment in shaping the lives of people, whether they shall be reliable and efficient, or unreliable and a drag on the community. The clear verdict of these scientists is that in the lower economic strata of our population there are vast reservoirs of innate intelligence which can be tapped only by improving the opportunities for development. For this development heretofore in this country we have depended upon the schools. But only in a narrow sense do children get their education in schools. For better or for worse, moral and social standards are cradled in the home and come to maturity in the wider environment of the neighborhood. With children living in the demoralization which is almost inevitable in over-crowded rooms or in neighborhoods where they are in easy contact with gangsters and harlots, the schools may be only contributing to the resourcefulness of future criminals. The better homes, the school, the church, alike are playing in a game against loaded dice. (The extent of the vice and demoralizing influences in the slums is established by the data in the chapter on Environment.)

Such are the slum conditions which public housing is designed to correct. To correct them we must supply not only wholesome housing, but a clean neighborhood, with sufficient interests and attractions to counteract the effect of the more exciting but hell-pull magnets of the slums. It is the organization of these interests and attractions which concern us at this point. We have previously outlined them—sports, theatricals, the development of skills, the pursuit of hobbies. Probably all would admit that they are good in themselves, at least in theory. But in the method of carrying them out there are some who have misgivings—either the tenants are spoiled by having too much done for them, or management may become perverted to some sinister political end and unduly influence the project population.

So far I have not discovered that any such tendencies exist. A wide contact with managers leaves me with the impression that they are primarily competent business executives, conscientious in not abusing their authority or potential influence, that they are helpful but not obtrusive, too often inclined to lean backward in encouraging coöperative activities. That, of course, does not preclude the possibility of pernicious tendencies in the future; but they do not seem likely as long as the initiative in social activities remains where it is. It is true that since so many mothers, wives, and even grandmothers have gone into industry, and fathers are working overtime or are in the Army, leaving children without guidance, and management is short of hands, many projects are not keeping up to the normal high standard—a symptom not peculiar to housing projects.

The initiative for social activities lies in a tenant association, usually formed early in the life of the project. Its function is to deliberate in all matters of common concern and, on behalf of the tenants, to deal with the management in all such matters. There are, however, some social activities, such as sewing classes, carpentry, theatricals, competitive indoor sports, which call for trained leaders who may not be found in the tenant group. Such leaders usually come in as volunteers from the ranks of local social workers. No doubt these leaders often have a part in initiating various social activities, and it is they, rather than the management, who would seem to have the contacts which might mould the thinking of the people within the project. In time and with training the tenants themselves are able to take over most, if not all, of the activities.[8] If anyone fears the social work-

[7] For details see chapter on Housing in England.

[8] "Community Service—A Review of Eight Years of Community Life at Hillside Homes," Bronx, N. Y., 1943, lists the organized groups and gives tables showing the number and age of those in each group.

ers, it must be because of lack of faith in democracy: for the social workers have been with us for generations and have proved their worth through the Red Cross, through the visiting nurses, through settlement workers and a host of others, and have in fact become an integral and a characteristic part of our democracy. As to "institutionalism" and "channelized living," the fact that all group activities are voluntary and under disinterested leadership would seem to preclude that danger.[9]

Actually the people in these projects are free to come and go and to live their own lives within the same legal limitations that prevail in other neighborhoods and with no more regulations than obtain in any well run apartment house or on any organized recreation field. There are no regulations which approximate the legal requirement that children of a certain age shall attend school, or the regulation that individuals submit themselves for vaccination, or conform to other regulations against the spread of epidemics, or a myriad of other regulations which characterize civilized communities. Not that such regulations are not desirable; rather they are the tools of the public aim to raise and maintain educational standards, standards of health, and of coöperative conduct.

On this point we sense that, with some critics it is the fear of planning, as against "laissez-faire," which raises doubts; the fear of departing from those very gradual advances in civilization which were particularly characteristic of the days before the rapid exchanges of ideas and experiences; a fear coupled with a belief in the Darwinian theory that evolution proceeds only by the gradual accumulation of minute advances, never by the more pronounced advances of mutations, as proven by the geneticists—due to some unusual combination of those essential life factors, the genes. What the traditionalist fears seems to be the combination of new ideas, putting two and two together for a planned solution of our problems. Since this attitude retreats before anticipated or imagined dangers or obstacles, it is essentially defeatist and seems out of place in a confident and courageous nation.

Such an attitude would have precluded the establishment of public schools, on the ground that the teachers or the school board might become perverted and plant wrong ideas in our children. Our school system has in fact been subjected to all the human frailties of those who have manned the teaching staff and the school boards, even to the frailties of meddling politicians; yet, despite the frequent failures to maintain the highest standards, we continue to support the system, the most costly of all our public undertakings, imperfect but indispensable. The experience of the schools we have before us for our guidance in public housing. From now on the only constructive course is to proceed courageously with our eyes open.

[9] For details see "Housing Management," by Rosahn & Goldfeld; Covici, Friede, Inc., New York, 1935, Now distributed by NAHO, 1313 E. 60th St., Chicago.

## A Comprehensive Post-War Housing Program

What of the feasibility of a program sufficiently comprehensive to eradicate all slums and to supply good homes and a wholesome environment for the entire population? In such a program we see the need of a number of changes from past policies and practices, on most of which we have previously commented, and most of which have in principle, if not in fact, been proposed by the several agencies involved. First we will itemize the changes and later discuss each item and cost of the program.

*Outline of Policies to Be Changed*

A. The field of subsidized housing should be expanded to include housing both for families practically destitute and for those who can pay the economic rent (i.e. at cost without profit)—to be further discussed in a later chapter on Family Incomes, p. 138.

B. For the income group next above those in item A, loans for mutual ownership, within large projects, should be made available on terms similar to those made during the war to local housing authorities by FPHA, except that there be required of the owner a small equity (not greater and probably less than the 10 per cent as required by FHA). The housing should be of approximately the same standards as in subsidized housing. Such housing might be in separate projects or integrated with public housing.

C. In all states the right of condemnation should be made available to redevelopment corporations,[9a] and encouragement should be offered to such corporations to undertake housing operations in blighted areas, but with adequate safeguards for all public interests.

D. For new individual homes, insured by FHA, costing say from $2500 to $6000 (pre-war prices), there should be an extension of the loan up to say 50 years, *provided* the homes be within a development which has such covenants as will reasonably insure the permanency of neighborhood standards. For such homes some reduction in the interest rate also should be sought—with loans direct from the government if necessary.

E. All federal aid to strictly rural housing should be under *one* agency in the Department of Agriculture.

F. Housing for Veterans under the G. I. Bill of Rights to be administered by a department of NHA.

G. A State Housing Authority to be organized in each state, its major functions being to study housing conditions throughout the state, to administer the provisions of the state housing laws, and to serve as a clearing house for information from all sources.[10]

H. The organization of a permanent Federal Council of Housing, for the study and recommendation of the public policies and procedures involved in

[9a] Preferably, as in the Maryland law, the right should remain in public authority, and be used by them for the necessary assemblage of land.

[10] For example: Bulletin No. 1 of the Division of Housing, N. Y. State Executive Department, is "Recommended Standards for Public Housing Projects."

all phases of the comprehensive housing program, particularly its integration in the economic, social, and political fabric of the nation.

In extension of items A to D we would add two other changes, which, while not as essential as the others would be of great aid.

I. Making available to the city plan authority, or some especially created authority, or to the two jointly, the right to acquire (by condemnation if necessary) property for the general development of the city, including housing, and the right to transfer such property for development by other departments of the city or to lease to development corporations, and the further right to sell any residue remaining after the transfer or lease of the major portion of any parcel. The details of this are discussed in the chapter on Rehabilitation (*p. 149*).

J. Extending the function of the local housing authority to include joint jurisdiction with the city plan authority on the location, the quantity and the type of *all* new housing and the alteration and repair of all old housing. The logical rôle of the housing authority would seem to be to determine the official policy of the city in regard to the quantity, distribution and standards of all low-cost housing, both private and public. High-cost housing can probably be adequately controlled by the city plan authority, through planning, zoning and subdivision regulations—if brought up to date. This broader activity of the housing authority would further emphasize the need of close coöperation with the city plan authority, and the over-all pattern for the development of the city.

*Details and Cost of the Comprehensive Program*

Of all these suggestions, *item A, subsidized housing*, is the only one requiring the expenditure of large sums of public funds. Under the changes suggested, while for the new groups of families of lower incomes the subsidies would be greater than those of the tenants admitted under the previous normal conditions, they would probably be offset, or more than offset, by the group of families of higher income, whose subsidy would in some cases be nil. So, in estimating the cost of subsidy to the public, we will use as the basic figures the average costs prior to 1940. As to the extent of this program, estimates have run as high as 10,000,000 family units for all substandard housing, both urban and rural. For the rural areas, estimates vary from one-fifth to one-half of the total rural housing, the wide variations being due to a lack of specific data and to lack of uniformity in ideas of standards—which we discuss in another chapter (*pp. 136, 137*). Because of this highly speculative data, and, as we point out in the chapter on Family Incomes, because the rural field is logically in the Department of Agriculture, which can care for most of it without subsidy, we will confine our discussion to the urban areas. In presenting the figures for the costs we will first assume the maximum costs and later show how they might be reduced.

As to the quantity of subsidized housing and the cost of replacing it: USHA estimated in 1940 that there were in urban and rural areas 4,500,000 family units which should be replaced by subsidized housing, and that this number of new units built over a period of 15 years, at the annual cost of $75 for subsidy (the average to the end of 1939), would in the peak year require $333,000,000 for federal subsidies. This is less than we were paying in 1939 for Social Service and Railway Retirement (for the benefit of a relatively small group), and only slightly more than half of the cost of Veterans' pensions in the same year. *See Graph I, p. 50.* If the cost of such an expansion of the public housing program were uniformly distributed, it would mean an extra cost to each family in the nation of $19.68 annually, or 38 cents weekly, little more than the equivalent of two packs of cigarettes.

The communities supplied with the new housing would make an additional contribution averaging about 83 per cent of the federal cost, or $16.08 for each family. This is about one-fifth of the cost of public schools in my home town of Hamden, Connecticut, which has a complete system with a large new high school. It would come to 31 cents a week, or about the price of two packages of cigarettes, which with the cost of the federal tax would mean the equivalent of cutting down the average weekly family supply of cigarettes by four packs. Also it is important to bear in mind that at the end of sixty years the loan will have been paid up, the federal government will be out of the picture, the local communities will have become sole owners, will receive all income, or may sell to mutual owners.

The foregoing figures are based on prewar conditions and may be considered as a probable maximum, since there are a number of factors each of which might bring about an appreciable reduction. While my own figures in Graph IX show a larger number of substandard houses to be replaced than does the estimate of USHA, many of that number can be expected to be replaced by housing other than that subsidized. Moreover in the post-war period there is reasonable expectation that there will be an appreciable reduction in the cost of building, due to new materials and building techniques—particularly by an increase in the prefabrication of construction units, and by reduced land costs to be brought about by the adoption of a policy of the public acquisition of land, as discussed at length in the chapter on Rehabilitation.

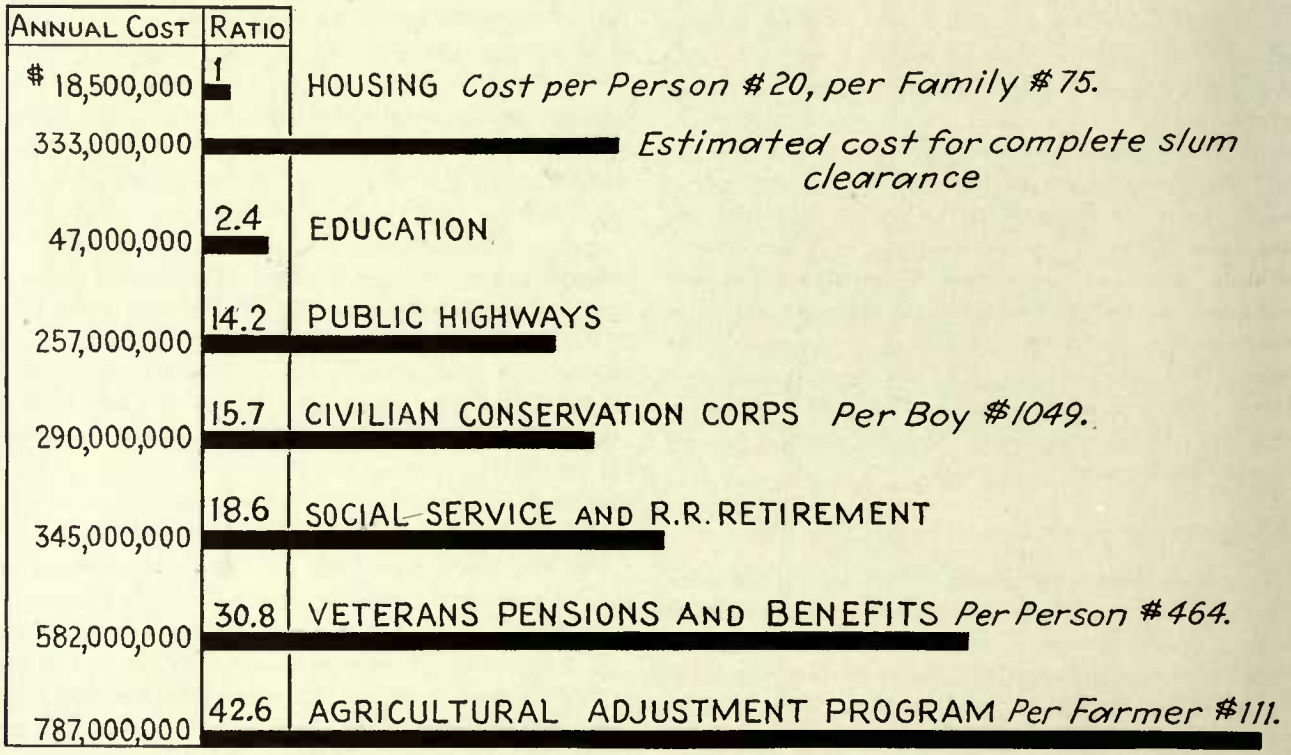
Such reductions would reduce the total bill for subsidized housing in two ways: *1*, by making lower rents feasible, thereby reducing the amount of subsidy needed to meet the rents; *2*, by making home-ownership available to a larger group of the population now living in substandard housing, to be accomplished through mutual ownership projects (Item B) and through our proposed more liberal terms for loans insured by FHA (Item D), as discussed in subsequent

paragraphs; thus reducing the quantity of subsidized housing needed; *3*, if, in addition to the reduced cost of housing, there should be an increase in the annual income of labor (particularly unskilled labor), through continuous employment without an increase in the hourly wage, then there would be a further reduction in the number of families requiring subsidized rents. With Eric Johnston, we have faith in the possibility of continuous employment. *See p. 32.*

The broad social principles alone would seem to amply justify subsidies for housing and there is abundant reason to believe that when all factors are weighed, from which there is a spread of urban blight, until such time as there shall become available to the population of the slums good housing at rents which they can afford.

As to *Item B, loans for mutual ownership*, we can profit by the experience of England, where the system originated as "co-operative" housing, by the experience of Holland where it has produced 75 per cent of all housing, and of Denmark and Sweden where also it has produced a fair proportion of all housing, the details of which are told in the chapters on those countries. In this item we include only such housing as

GRAPH I. ANNUAL COST OF $800,000,000 OF USHA HOUSING LOANS AND OF A COMPREHENSIVE SLUM CLEARANCE PROGRAM (COMPARED WITH SEVERAL OTHER FEDERAL EXPENDITURES.)




Note: Each item includes the cost of administration. The item for housing (including $5,000,000 for administration) is taken from "What Does the Housing Program Cost?", (U.S.H.A. op. cit.) as are all items for cost per individual, etc. Other major items are based on data in "Bulletin of the Department of the Treasury, Sept. 1940", for 1939 . . . . For estimate of complete slum clearance, see p. 49.

such expenditures may be an actual economy. These economies are felt primarily in the communities where the housing is built. The new neighborhoods reduce the public expenditure for crime, public health, sanitation and fire protection, and are an aid in arresting urban blight, details of which and of the general burden of "deficiency areas" are given in a later chapter. *See p. 149.* The economies in the federal finance are less directly felt, but the spread of blighted areas, with the consequent shrinkage of values and incomes from the properties within these areas, must appreciably affect that portion of the national income derived from personal and corporate income taxes. And the slums must continue to exist and to be centers

would be in No Man's Land, between the operations of FPHA (as modified under our suggestion) and the field of low-cost housing as insured by FHA—the area represented as A on Graph IX (*p. 142*). Our rough estimate of the substandard housing in this area is about 34,000 units, under pre-war conditions. Even though this number may not appear large compared with those in other items, it would fill an important gap, for while this group is more prosperous than those served under Item A, it is still living in substandard housing. However, as previously pointed out, with any substantial increase in the net income (i.e. an increase of income over and above an increase in the cost of living) mutual ownership might become available to a por-

tion of the large group included in Item A—represented as area D on Graph IX.

Mutual or Cooperative companies, being in effect limited dividend companies with dividends returnable to the owners, are private enterprise agencies. (*See p. 173*).[11] And being private enterprises they are eligible for FHA insured loans. But loans insured by FHA are made by private financial groups, which might not be interested in making loans for this type of housing. If that should prove to be the case, then direct federal loans should be made available, at rates based on the cost of money to the government.[12] In either case the equities of the mutual or cooperative companies would come through the savings of the members. One natural repository for such savings would be the Savings and Building Loan Associations. While the mutual projects which were started under FWA were transferred to FPHA when all existing federal housing agencies were placed on a war basis, it does not follow that FPHA is the logical agency for their peacetime administration.

*Item C, the housing that might be expected to be produced by redevelopment corporations*, may possibly become extensive and clean up much of the slums. Of this, more presently. Although since 1941 a number of states have authorized such corporations, the new technique has had no opportunity for a test, owing to the cessation of normal building operations. The nearest we have to a test is the proposed Stuyvesant Town. The heated discussion of this plan, as originally presented, suggests that more safeguards are needed to assure that the public aid given the investors (through the right of condemnation, a reduction of taxes and a grant of some of the land now in the streets) will be balanced by a *quid pro quo*, an assurance that the new housing will fit into the broad program of low-cost housing and into the plan for the total development of the city. Though the new technique promises to clean up large areas of the slums, if pre-war conditions should extend into the future the new housing would for the most part be available only to families in the upper income group of No-man's-land, and only to a small extent would it be available to the families dehoused. If, however, in the post-war period building costs should be appreciably reduced, or tenant incomes be appreciably increased, as previously suggested, then rehabilitation could reach widely into No-man's-land. Obviously this type of housing must be balanced by a program of public housing sufficient to care for the families dehoused. The only public financial burden involved is the possible temporary reduction of tax returns; but this would become serious if the operations were extensive enough to be effective as slum clearance and if the tax reduction were not kept within limited bounds. *See p. 19.*

*Item D, providing easier financing of privately owned homes costing say from $2500 to $6000*, would probably open up a field several times larger than the previous small house ownership activities of FHA. While it would operate in the open or suburban areas, the families profiting by it would in general be those formerly in the more densely populated areas, some portion of whom would doubtless be in the upper income area of No-man's-land.

*Item E, Rural Housing*, has been so ably handled in the Department of Agriculture, as a part of rural economy, that this department seems the logical place for it, and might even include any housing which may need to be subsidized. Thus it would take over the rural work initiated by the USHA, all the housing activities in the Department of Agriculture being merged into one.

*Item F, Loans for Houses under the "G. I. Bill of Rights"* (public law 346–78 Congress; chapter 263—2nd Session; approved June 2, 1944): The veterans should have the benefit of the advice of the existing housing agencies in determining standards of construction, of design, of neighborhoods, of appraisal and in the rural areas the further experience of the Department of Agriculture in determining the quality of the land, the suitability of various crops and available markets. Without the advice of the experienced disinterested experts the veteran will all too often become the victim of his own optimism and that of the high-pressure salesmen who will beset him; and so the good intentions of his grateful fellow citizens will be as nuts with worms where the kernel should be. The function of the Veterans Administration should be to determine the eligibility of the veteran for the loan. The administration of the loan should be by an agency set up for that kind of job—an agency of the NHA or of the Department of Agriculture. Such procedure seems to be optional under Section 505. It should be mandatory. Otherwise, to protect the veteran's interest and assure the permanent reward which was intended, the Veterans Bureau would have to set up its own urban and rural housing agencies.

*Item G, the establishment of State Housing Authorities*, has since 1926 been a reality in New York, where state loans and tax exemptions have been available for several types of housing development, under the State Board of Housing. Such an authority is needed to assure the improvement of housing throughout the state and is desirable, if not a necessity, wherever rehabilitation corporations may be authorized. It bears to the local authority somewhat the relation that a state department of education bears to a local department. In Connecticut, for example, the au-

[11] This fact Mr. Klutznich seems to have overlooked when he stated that he hoped to see a gap of from 15 to 20% between the incomes of those in public and in private enterprises, for it is evident from the context that he had in mind housing for investment. *See "Post-War Public Housing," speech by Phillip M. Klutznich, Commissioner, Federal Public Housing Authority, before the Citizens' Housing Council of New York, Nov., 1944.* Otherwise this group would continue to be deprived of decent housing. As Mr. Randall has put it: "What is the ceiling of public housing is the floor for private housing"—*See p. 30.*

[12] FSA has been able to loan at 3%. See p. 239. N. Y. State at 3½%. See p. 174.

thority, in addition to studying the state problems and negotiating loans, is authorized to coöperate with local authorities in producing, owning and operating housing projects, both urban and rural.[13]

*A Proposal for a National Council of Housing*

*Item II, A Federal High Council of Housing,* should have a membership which would be representative of the many interests involved either directly or indirectly in the housing problem, a problem exceedingly complex in itself and touching the national interests at many points. To study the problem in all its ramifications, to adjust conflicting objectives and desires and to develop well-considered and balanced policies, would require the deliberations not only of the various federal housing agencies, but representatives of other departments and bureaus of the government—Commerce, Labor, the Interior, the Treasury, the bureaus of Health, of Standards, of the Census and the national planning agency (whatever its future title), together with a representative of each branch of Congress. To these should be added representatives from civilian groups—sociologists, economists, doctors, psychologists, lawyers, architects, engineers, city planners and possibly regional representatives. Obviously such a council would need a relatively small executive committee and a permanent staff, and would operate through its executive committee and chief officer. Its function would be to establish the national policies of the comprehensive housing program, developed through its wide and democratic membership, and to safeguard the integrity of those policies as put into practice.

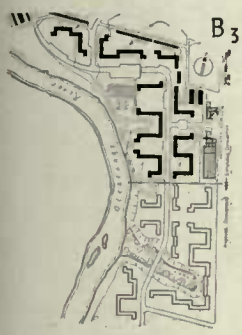
[13] "An Act Concerning a Housing Authority," Chap. 264 of the Several Statutes, providing for an administrator, with such other staff as may be needed and an annual appropriation of $25,000.

*Resumé*

Such is the history of the origin of slums in the United States, and such the methods and policies by which it has been proposed to eradicate them and build good housing for those living in the slums and also for those who can pay their own way, and our suggestions as to future policies. Definitely the task of rehousing those in poor housing is only begun; the major work lies ahead. In a number of the democratic countries in northern Europe, the work has been going on for a much longer period. Their varied experience should help us in appraising our work up to the present and so help us in our future work. For this reason at this point we would have the reader review this foreign experience, both for its major trends and for the details of technique, many of which involve interesting methods of financing. Since the British inaugurated the movement for better housing and did the spade work, we narrate the experience there from the beginning. In other countries we emphasize some special phases of housing, which have been developed further. Most of this is rather recent work, some of which has not heretofore been comprehensively presented in this country.

# PLATE XVI. FHA INSURED RENTAL HOUSING









Note: Rents are at monthly average per room.

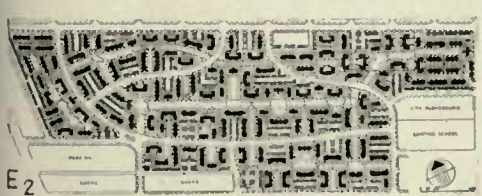
A. 1937–38. Falklands, Silver Springs, Md. Note adaptation of buildings to topography and home-like quality. Coverage 15% ±. Walls brick with tile backing, floor reinforced concrete. Rent $14.50. Arch't. L. Justement.

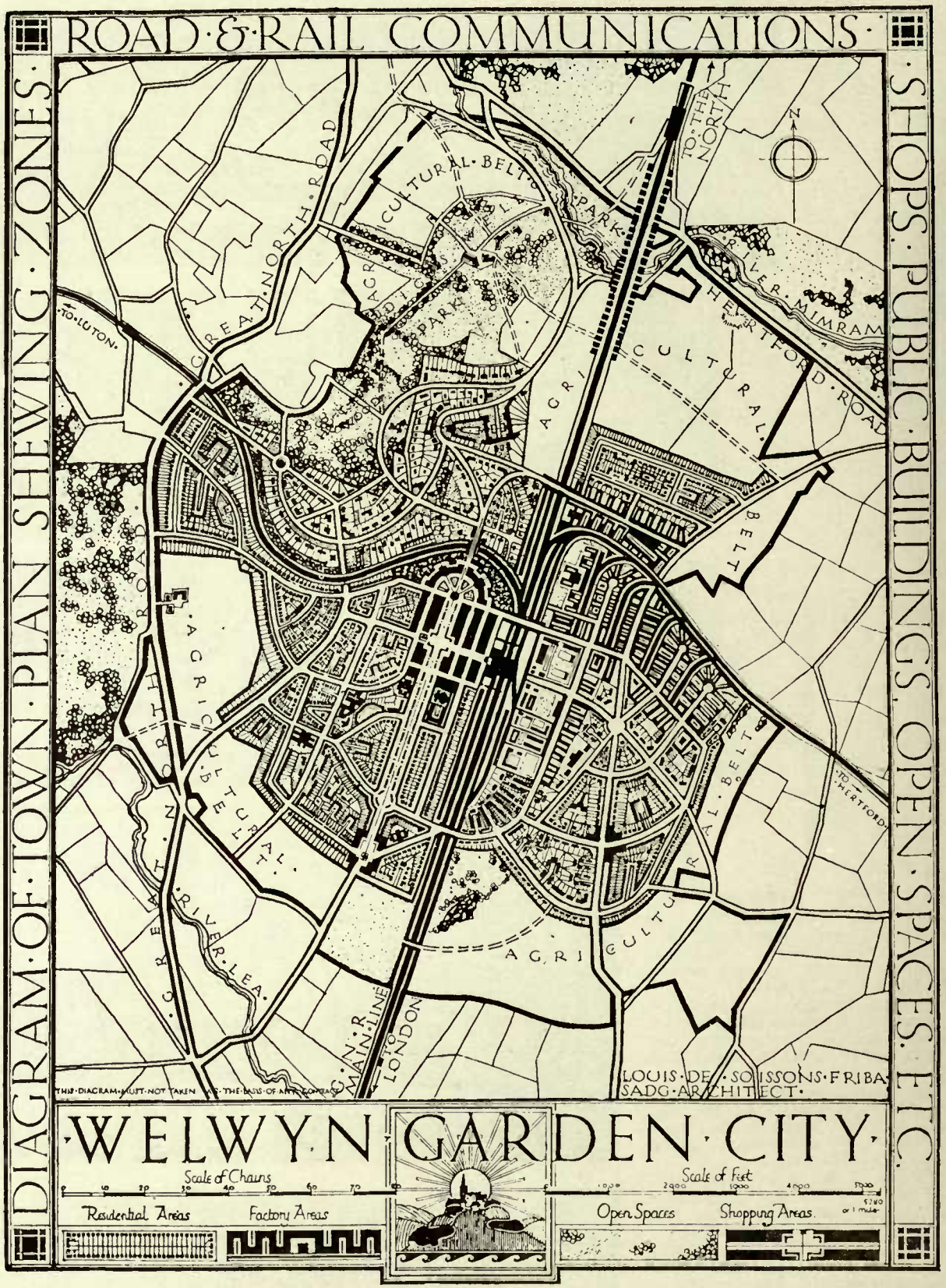
B. 1939. Columbus O., Olentangy Village. Includes tavern, stores, and recreational facilities. Walls of brick; floors reinforced concrete. Coverage 11.5% ±. Rent $14.08. Arch't. Raymond C. Snow.

C. 1940. Westchester County, N. Y. Interlaken Garden Apts. First stage (1/3 of total). Coverage 14% ±. Brick veneer or wood frame. Arch'ts. de Young and Moscowitz. Landscape Arch'ts. G. Clark and M. Rapuano.

D. 1939. Flushing, N. Y.; Kew Gardens Hills. Coverage 15% ±. Brick with cement block back-up, floors reinforced concrete. Rent $18.50. Arch'ts. B. Snow and G. F. Titus.

E. 1939. Los Angeles, Cal., Wyvernwood. Considered large enough to be independent of surrounding obsolescent area. Coverage 25% ±. Walls stucco on wire lath. Rents $8.75. Arch'ts. D. J. Witner and L. F. Watson.




Note: (a) Surrounding the city the agricultural belt (which ultimately may be made continuous by the accessions which are being made gradually); (b) factory area to right of railway (heavy straight lines running north to south), with workers houses to south and east; (c) shopping district to west of tracks, near Depot, and lots for larger houses to the west and north. Scale and symbols at foot of map.

## SECTION III. HOUSING IN ENGLAND AND NORTHERN EUROPE

### Introduction

Slums existed extensively and intensively in cities of ancient times. In Athens and Rome they were a source of much trouble and were put under legislative control. They developed within the restricting walls of medieval cities, and after the walls came down the unrestrained urge toward the center of urban activities perpetuated the central congestion.[1] Land in the center of the city came to be at a premium, contributing to high rents; the necessities of life had to be brought in from the outside, with a profit to each middleman and a consequent high cost of living in general. It is in the cities that competition has always been greatest, that ultimately the strong rise and the weak sink—to the extent that the law of the jungle persists. The history of housing is the history of an effort to supplant the law of the jungle by the laws of civilization in a certain limited but important aspect of life. The movement for better housing is one of the vanguard movements of our current civilization. This becomes evident as we get the story of housing from those countries in which the government has undertaken to assure good housing for the entire population.

In different countries the details of the procedure in housing betterment have varied with the fundamental physical characteristics of the country—its geographical location, its topography and natural resources—with racial characteristics and traditions and especially with its rising and falling financial resources. Yet the factors which these countries have in common and also share with us are more than those in which they differ.

So far as housing is concerned, the national characteristics and traditions which most concern us are those bearing on standards of living. These standards do vary from country to country, but they also vary from class to class within each country, a fact which complicates the comparisons between one country and another. "Standards of living" are *not* synonymous with "standards of housing," for standards of living involve standards of housekeeping. It is true that standards of housekeeping are in part dependent upon standards of housing, on the physical equipment available for housekeeping. A dark kitchen, with rough floors, crumbling plaster, a worn-out coal stove for both cooking and heating, and a leaky sink with only a cold water faucet—such conditions are discouraging and demoralizing to the housekeeper of the best of standards, entail needless labor and in no country are they an acceptable standard of housing.

The things on which all countries are in agreement are adequate light and air, walls and floors which can be easily cleaned, construction which is sound and as near vermin-proof as possible, running water in each dwelling unit, facilities for personal cleanliness, and convenient means for the sanitary disposal of sewage and waste. The things on which standards vary most is the size of dwellings in proportion to the number of occupants, the amount of privacy afforded to individuals, and the extent to which labor saving conveniences are supplied (such things as running hot as well as cold water, gas or electricity for cooking, central heat, mechanical refrigerators). On the score of labor saving devices in low-cost housing, American standards, as adopted by the housing experts, are higher than those adopted in any other country except possibly in the later housing in France. In most other standards England has set the pace.

A favorite question of the American amateur houser on seeing an attractive low-cost house in a foreign country is, "How much does that house cost?" If the cost, based on current exchange, figures out as a half or a third less than the cost in dollars of a similar house in America, he thinks he has something to write home about—without stopping to ask about the income of the man who will live in the house or the cost of maintenance. This is nonsense. If the man's income is a half or a third less than that of the man in America who would occupy such a house, then that man is no better off than the American, assuming they are based on the same maintenance charges, which may not be the case. In other words, if a Dutch guilder buys as much housing and as much food and clothing as an American dollar it is only misleading to figure the cost of the Dutch housing in American dollars which in exchange are normally worth twice the guilder.

The only basis for comparison is the proportion of income required to have a similar type of dwelling. For that reason we have not generally translated the foreign money into American money, but have given the proportion of the income which goes into rent and, where reliable figures are available, the other items making up the budget.

One of the fundamental causes for bad housing is the overcrowding of the land due to the high value placed on the land and the consequent overcrowding of rooms. (*For a discussion of land costs see sections on Land, p. 189, and Urban Growth and Rehabilitation, p. 145.*) Viewed from another angle, one of the chief impediments to the production of new low cost housing in many countries has been the high cost of the land needed for the adequate spacing of housing. Municipalities in Germany, Holland, Denmark and Sweden, among the countries here considered, have been able to supply land at cost, because of the large amount of municipally owned lands, both within the city areas and beyond them. In some instances the extent of this land has been several times greater than the built up area of the cities. With the Germans this is an old tradition of municipal life, "which can-

[1] For expansion of this idea see Chapter on "Pattern of Urban Growth," page 145; also, "The Culture of Cities," Lewis Mumford, Harcourt, Brace and Company, New York, 1938.

not be attributed to any special legislation, for it goes back to a period long antecedent to the existing system of communal government."[2] In at least some of the other countries just named it seems to be of relatively recent origin, but it has none the less been available during the period in which programs for improving housing conditions have been under way. In Germany, Holland, Denmark and Sweden, where the municipalities owned or had the power to buy at low cost the land needed for housing, the housing program, when under way, has moved faster than in England, France and the United States, where municipally owned lands were not available. Coöperative building societies originated in England as part of the general coöperative movement; yet they developed more rapidly in those countries where cheap municipal land was available. It seems probable that there is a causal relation. This ownership of outlying fertile lands is what made possible in Germany the small suburban subsistence gardens for city dwellers during the first World War, and enabled the Scandinavian countries to follow suit.

In the following narrative we have endeavored to point out the characteristic differences which affect living conditions and housing in the several countries. In each country we have singled out for emphasis those features in the development of better housing which are of special interest, not for blind imitation, but as suggestions to us in the United States and possibly to some other countries, as stimulation to further creative effort in the same direction. England was the pioneer in improving housing conditions, so there we have traced the evolution of housing standards and the legislation which was necessary to bring them into effect. In the planning of garden suburbs and garden cities she also has made a signal contribution, and that too we emphasize. In Holland we focus on a comprehensive program which overlooks no class, and we show the efficiency of the coöperatives, aided and supplemented by central and local governments. In Sweden it is the coöperatives and their influence on general living conditions; also Stockholm's municipal suburban developments, including the "Magic House." In Denmark it is the coöperatives, aided by government supported mortgages; and the fact that, with relatively little federal aid to slum clearance, there was a proportionally limited accomplishment in that field. In Germany it is the methods of land control and the Nazi revival of an ancient German tradition of a Spartan self-discipline and state-discipline, resulting in a scheme of housing based on the hoped-for development of an almost heroic type of character which seems fast disappearing elsewhere. In France it is the early effort at the decentralization of urban populations through home-ownership in the suburbs, followed by a movement for slum-clearance and rehousing in Cité-Jardins, in which subsidies were limited to those who, in the armed forces and civil service had made sacrifices or had become pensioners through long and faithful service. Finally we include a glimpse into Russia to see what happens in a country where the government owns or completely controls all housing, together with other property, and where there is no profit incentive in any undertaking.

All these countries the author visited near the end of the constructive inter-war period, in the summer of 1937, and was guided and assisted in his studies by the local housing officials. Prior to that, after the signing of the Armistice of 1918, he had had opportunity to study the English war housing for munition workers and other housing which had gone up since his still earlier visit, when the garden city idea was just getting under way. Again in 1930 he saw against a more matured landscape setting the housing which was only getting under way in 1919, and saw the newer housing built between 1918 and 1930. France was an old story, dating from several years spent there in student days, more than three decades ago; another year there with the A.E.F. of the first World War, and several months in 1930. The housing in Holland he had also seen in 1930. Where there are no special notations of the source of facts in the following text, they are generally derived from observations and notes made on these trips. The accounts of the housing in the several countries has been brought up to the outbreak of hostilities in 1939, and in Holland up to May 1940.

In the countries invaded by Germany we cannot now, nor for some time, expect any new developments in housing, nor can we expect much of significance from the other countries involved in the war. Yet reports which, up to the United States' entry into the war, were still coming from the International Federation of Housing and Town Planning (the headquarters of which had been moved from Brussels to Berlin, *see Bibliography, p. 244*), indicate certain minor activities in Germany. From other sources we learn of the adoption of certain emergency housing policies in England. So the following account may be considered as of the status quo ante, or point of departure for any housing which may take place after the war.

## Housing in England

### *The General Picture*

The way of life in England, as elsewhere, has responded to the climate, and the type of home has responded to the way of life. Although in the latitude of Labrador, this island in the Gulf Stream is normally mildly warm in summer and mildly cold in winter, with abundant showers and more than occasional fogs in winter. The long growing season, abundant moisture and a fair amount of sunshine which has induced the native verdure has also made gardening and out-of-door life in general a natural habit with the English, old and young. One aim in English housing has been to give to as many as possible their

[2] "Town Planning—Past, Present and Possible." H. Inigo Triggs, A.R.I.B.A., Methuen Co. Ltd., London, 1909, p. 179.

own garden plot and to supply space for out-of-door recreation. The need is greatest in the center of great cities, where smoke mingles with frequent fog to turn noontime into jaundiced dusk. While gardens here have not often been possible, yet it is their attainment which accounts in part for such large decentralized housing estates as Beacontree, twelve miles from the center of London with 26,000 dwellings in 2770 acres.

With a total population of 37,355,000 in England proper, the average density of population is great, some 700 people to the square mile (about the density of Rhode Island, the densest state in this country, and twice that of Connecticut, another of our denser states); but this high average density is due to the great cities—London with over eight million, and some fifty other manufacturing and seaport cities with from one hundred thousand to one million. Great Britain has her own supply of coal and some minerals and agricultural products, but the occupation of the majority of the people is in manufacturing, commerce, and the professional, clerical and service work incident to the general life of the island and of the Empire. Not for generations has there been any appreciable admixture of foreign races. If we may take the national revenue (meaning income from taxes) as an index of the comparative desire of nations to achieve public objectives, the rating of England, Scotland and Wales would be about £20 per capita, or some $97, on the basis of exchange, but much more than that in purchasing value. For comparison, per capita revenue in the U.S.A. was at the same period $43.21, or if based on the relative purchasing values of the pound and the dollar, something like a third of the British rate.

*When and How Did English Slums Begin?*

The uncontrolled growth of cities leads to overcrowding even under normal conditions. On top of the overcrowding inherited from the days of walled cities and the normal subsequent overcrowding, two striking events in the 18th Century contributed to an abnormally rapid growth of cities in England. In the early part of that century the wide-spreading "open fields," for the common use of all the people, were by governmental act gradually closed off from common use and diverted to private use. Small farmers, deprived of their agricultural occupations, sought occupation in the city—beyond the capacity of the city to employ them. This caused a lowering of the wage level. While in general the new private tillage system was much more productive than the old and increased the total prosperity of the nation, it was at the expense of the poor, in country and city alike. The second event began in the last quarter of the 18th Century with the industrial revolution and the development of steam transportation. These two events gave further impetus to the concentration of population within the old cities and in the new manufacturing towns which grew up. Existing houses were crowded to the utmost and the new houses built by tens of acres were crowded to the limit on the land, were cramped within their own walls and had most meager sanitary facilities. A new type of slum was in the making.

The industrial revolution had its origin in England and, through the impetus which it gave to her manufactures and foreign trade, it gave England a start in a new era of prosperity, with which came an increase in population (43 per cent from 1790 to 1821) and the inevitable further over-crowding within the cities. In the industrial city of Manchester, for example, the population increased from 70,000 in 1800 to 339,000 in 1861. To care for this growth there were built up great areas in which each block was a solid mass of houses from street to street; a party wall ran lengthwise down the middle of the block and party walls between each individual house, no back yards, no side yards. A later type improved this situation only to the extent of providing very shallow backyards. *See Plate XIX, p. 69.*

London in the mediaeval days was a walled city, closely built. Modern London, with its hundreds of square miles, still crowds around the old "City." Buildings are lower in London than in most European cities because, in part at least, of an ancient law preventing the erection of a new building which might obstruct the light from an adjoining building of another owner. Also there are many extensive open spaces for parks and the grounds and gardens of the wealthy which, while a boon in supplying air and sunlight, have also tended to exaggerate the crowding on the remaining land near the center—narrow streets, crowded houses, crowded rooms—the result also of having no plan for growth. Probably more than in most cities, the poorer population has lived in outmoded and transformed houses and still other houses built in the yards of the original houses. Yet in addition to these the city has its speculative row houses of mean standard, erected largely early in the industrial era.

*Government Recognizes Need for Better Housing*

Back in 1593, as officially recorded, "Great mischiefs daily grow and increase by reason of pestering of houses with divers families, harboring of inmates, and converting great houses into tenements, and the erection of new buildings."[3] In 1665–66 the great plague cast a pall over London. This was followed by the great conflagration of 1666. John Stowe's voluminous "survey" had recorded the extreme condition of overcrowding, which carried with it dangers of epidemics and conflagrations, of congestion of traffic and population and of squalid living.[4] The complete rebuilding of the city on sounder lines was strongly urged. Sir Christopher Wren and others submitted plans, but

[3] From an act of Parliament quoted in "London Housing," London County Council, 1937, p. 1.

[4] "A Survey of London," John Stowe, 1598.

all with little avail, save for regulations requiring new buildings to be of masonry. There it ended—except as the authority of Wren's statement of the need has had its echoes down through the centuries. Conditions went from bad to worse until, in 1841, Lord Shaftesbury raised a voice which started the movement for better housing of the masses—another voice still echoing throughout the civilized world.

This resulted in the first Public Health Act of 1848 and in 1851 two acts known as Lord Shaftesbury's Acts: (1) the Common Lodging Houses Act, securing the inspection of existing lodging houses and the providing of new ones, and (2) the Laboring Classes' Lodging Houses Act permitting municipalities to provide houses for working class families and single men and women. The latter was avowedly experimental. Philanthropic housing associations were organized, but these, even with the backing of the Act, brought no appreciable change. So, to make this legislation effective, from time to time re-enforcing acts were passed, some dozen up to 1890. The Cross Acts of 1875 and 1879 empowered the local governing bodies to clear and reconstruct unhealthy areas and to prepare building codes designed to make future houses safer and more sanitary. Through the powers conferred by this Act, the Metropolitan Board of Works in London planned twenty-two slum clearance schemes, which by 1890 displaced 29,004 people and provided new homes for 30,679.[5] But the higher housing standards exacted by the codes raised the cost of new housing and so tended to induce an intensive use of the land. The costlier houses were available to only a limited group, with adequate incomes. Meanwhile the expanding population in the lower income group were for the most part forced to further over-crowding in the old houses.

In the erecting of improved dwellings philanthropic housing trusts were the pioneers. The Metropolitan Association erected the first block in 1846, and by 1890 fourteen trusts in all had erected some 70,000 dwellings, working in close coöperation with the official Metropolitan Board of Works, which cleared the slum areas and sold the land to the building trust, but did no building on its own account. In this period, outside of London, the housing movement made little or no headway. It will interest Americans to know that George Peabody, an American citizen, founded one of the earlier trusts (in 1862), which in 1935 amounted to nearly 3 million pounds and had produced about 7,200 dwellings, some of the oldest of which the author saw still in use in 1937—in the much-bombed Thames Estuary. In this same period it is estimated that other private enterprise produced about 150,000 dwellings. Since 1889, when a Housing Committee of the London County Council took over the housing functions from the Board of Works and actively entered into building operations, the operations of the trusts have been less significant.

[5] "London Housing," The Housing Center, London, p. 3.

Closely akin to the Trusts and their methods was the work of Octavia Hill, who had started her settlement work in 1864, and extended it into the management of rehabilitated slum properties. She combined the collection of rent with a sympathetic inspection of housekeeping and family life—with the stimulation of rewards for a good showing, and judicious discipline for bad housekeeping.[6] Out of this work have developed the managerial methods of modern housing. Better standards of living were being established, but, measured in terms of better housing for the total population needing it, the quantity was relatively slight. The London population, two and one quarter million in 1840, was increasing until it had reached four and one-half million by 1910, and had spread over a much greater area.

*Garden Communities and Other Accomplishments before World War I*

Robert Owen, pioneer cotton spinner and liberal political thinker, had, early in the century, improved the housing and living conditions of his employees and urged general action in this direction. To meet a similar situation in a later day, George Cadbury in 1879 expanded Owen's idea and built the garden village of Bourneville, in connection with his chocolate factory on the edge of Birmingham. A trust was organized, three hundred thirty acres of land acquired, and comprehensively planned for all community needs, with roads winding in harmony with the topography, and of widths varying according to needs; no house occupying more than one-fourth of the lot, with front and back yards for gardens, and a limit of density of eight families to the acre. With a start of three hundred thirteen buildings for all uses, by 1929 Bourneville had a population of eight thousand in two thousand houses spread over one thousand acres. Tenants were not restricted to Cadbury employees, but were drawn also from the neighboring city of Birmingham. Rents are scheduled to produce a slight profit, which goes largely into the trust fund.[7] Similarly Port Sunlight, across the Mersey River from Liverpool, founded by Lever Brothers Soap Co., in 1887, also is a self-contained garden village. Starting modestly with fifty-six acres, by 1918 it covered five hundred fifty-seven acres.[8] (*Plate XVIIIA. p. 68*). Rents were scheduled to include maintenance costs only, as the capital investment (about $3,000,000 in 1918) was considered the share of company profits due the employees, to whom tenancy is limited.[9] In 1904 Mr. Rowntree, of

[6] A detailed description of her methods is found in "Slums and Housing," J. Ford, pp. 573–75. See also "Housing Property Management," #4, in Carter Series, His Majesty's Stationery Office, London, 1932.

[7] Int. Nat. Housing and Town Planning Bulletin #20, 1929.

[8] Village of Port Sunlight, by Patrick Abercrombie. Handbook Int. Nat. Town Planning Exhibit and Conference in 1910—re-edited to 1918. Also Port Sunlight "A Successful Experiment in Profit Sharing." Lever Bros. Ltd., Port Sunlight, Cheshire.

[9] Sir Raymond Unwin gives the density of both this and

York, established a trust to build Earswick for his chocolate factory employees, an undertaking not as extensive as those previously mentioned. (For plans of this and Port Sunlight *see Plate XVIII, F and G, p. 68*). Other manufacturers followed. Thus, while the laws themselves were not yet producing results greatly affecting the mass of the population, leading manufacturers, and the general public as well, had become convinced of the importance of good housing. The technique of designing garden suburbs was being evolved. The national housing laws were amended and broadened until finally they became fully effective in the law of 1938. The various steps are enlightening.

In 1890 "A Principle Act" was passed consolidating former laws and extending them to include the following important principles:

A. "That the right body to deal with local housing conditions was the local municipal authority.

B. That the work of these local authorities should be supervised by a national government department.

C. That the local authorities should have power to:
   (a) Acquire and clear slum areas and rebuild to house the workers displaced.
   (b) Serve on the owners of individual houses, where the conditions were dangerous and injurious to health, "closing orders," requiring the house to be kept empty unless and until it was put in proper repair and, failing this being done within a reasonable time, to issue demolition orders requiring the owners to tear them down.
   (c) Buy land and build additional accommodations to relieve overcrowding.
   (d) Borrow the necessary capital to enable them to do this work."[10]

Note that all this was permissive only and that no form of financial assistance from the central government was provided. With a few exceptions cities did not clear slum areas, did not build additional housing, but confined themselves to closing and demolishing unfit dwellings.

Lack of results in the slums again set the British thinking. Ebenezer Howard, a studious London bookkeeper, conceived a new way to check the increasing congestion of population in London and other large cities.[11] In 1898 in his "Tomorrow" (later entitled "Garden Cities of Tomorrow") he proposed: To purchase a large tract of farm land, in the center of it to lay out a "Garden City" similar to the garden villages, but of greater size, and self-sufficient; to leave around the city a wide belt of agricultural land for supplying food for the city population and to assure in perpetuity the open semi-rural character of the community; to draw n a variety of industries to supply work for the population—which would be limited to about 32,000; to reserve to the community the unearned increment of increased land values. Within a few years the first Garden City was organized at Letchworth, about thirty-two miles from London, in a tract of 4433 acres, some two-thirds of which was reserved for the agricultural or green belt, leaving 1500 acres for the city. Profiting by the experience of the garden villages, a standard was adopted of twelve houses to the gross acre as the maximum density. The amenities of rural life were thus secured and with them all the amenities of an efficiently planned city.[12] The years have proven the soundness of Howard's ideas. Thirty-two thousand people have lived under delightful and wholesome conditions. As revealed by the vital statistics given later in this chapter, the health and mortality of the community is definitely above that of the rest of England—even when we give weight to the fact that it was a new community.[13]

An important variant of this movement to join the amenities of an urban life with those of the country was Hampstead Garden Suburb, started in 1906 on the edge of London. Having no industry within its area, it is self-sufficient only in its daily domestic, social and cultural activities. On the other hand, stress is laid on the desirability of having a population containing all strata of society, from the London clerk to the local lord of the manor, all closely united in community life. Of the original two hundred forty acres, seventy-two were set aside for the working class. The same general methods of town planning were adopted as in previous garden communities, with the houses at eight to the gross acre. The total acreage in this and affiliated adjoining estates, which were organized later, is now about eight hundred acres.[14] To perpetuate adequate control of the development and maintenance standards, land is disposed of on long term leases (originally 99 years, later 999 years)—a valuable technique which has been used but little in the United States. Incidentally it may be noted that the type of roads, sewers, subdividing and various restrictions required in the Garden community were at variance with the existing rigid legal regulations and that their adoption called for special legislation by Parliament. Out of this grew the Town Planning Act of 1906, which provided for limiting the number of houses per acre and the relaxation of out-moded local codes. This act, in turn, was expanded in 1932 to *require* all local governing bodies to prepare and submit town planning schemes, authorizing them to zone and replan built-up areas (to prevent promiscuous developments) and to protect the natural beauty and amenities of the locality.

In Letchworth and Hampstead Gardens the

Bourneville at about 12 houses to the acre, including streets. See "Town Planning in Practice," Chas. Scribner, New York, Second Edition, 1919, p. 320.

[10] "British and American Housing," Richard L. Reiss, National Pub. Housing Conference Inc., N. Y., 1937, p. 29.

[11] M. A. Shadwell attributes the original idea to St. Loe Strachey in "Housing," Encycl. Britannica, 1911.

[12] "First Garden City of Letchworth." By the Company, 1913.

[13] See Table VI on p. 63.

[14] "The Hampstead Garden Suburb," 1938. R. L. Reiss, p. 6.

actual building of the smaller houses was normally done through limited dividend financing corporations. As garden suburbs and villages increased, this type of financing became quite general, and was a factor in the increasing number of such communities. A national central organizing group for such corporations was established in 1905. But obviously this kind of housing was in reach of only the more prosperous of the working class. It was not within reach of the slum dweller; evidence was lacking that the slum population was "filtering up" into the houses given up by those going into the rural communities, and the local housing authorities were not aiding with any new construction.

In 1909 an act was passed to prevent the increase of slum conditions—the only one enacted in the period from 1890 to the beginning of World War I. Even with the encouragement of this latest legislation and the encouragement of the activities of private enterprise, not much of an impression was being made on the great mass of bad housing. By 1912 the London County Council, which had taken over the housing work of the Metropolitan Board of Works, had completed four more clearance schemes, displacing 16,434 people while replacing only 15,624. Meantime it had built cottage dwellings in the outskirts, housing 20,000 people of the working class—this in a population of several millions.[15] The British government itself, in a special report in 1912, expressed dissatisfaction with the progress which had been made up to that time and appointed a special committee to investigate conditions and make recommendations. The report stimulated still further the demand for more drastic treatment of the housing problem. During the World War there was great activity in housing munitions employees—usually in garden communities. For the great body of men in the army similar good housing was promised. Out of the report of 1912 and this promise came the post-war program.

*Summary up to World War I*

The essence of the foregoing account is that, first, after the London fire it came to be recognized in principle that as *a precaution against the spread of epidemics, against the menace of conflagration* and in the interest of the general public, slum areas and congested obsolete buildings should be cleared out; second, after Lord Shaftesbury's attack, it became recognized that the *bad housing made decent living impossible* for a very appreciable portion of the British people, *an ever-present condition more vital than the menace of plague or conflagration.* The rest of the story is one of developing techniques to accomplish the ultimate goal—the opportunity for all to live decently. The chief tools in the technique were (a) some form of financial assistance from the central government; (b) increasing the authority of the central government and of the local governments to act; (c) authorizing the central government to *require* action of the local authorities. Thus the changes in laws were in large part a change in the financial approach and in the allocation of responsibility. Despite the failure to produce housing of adequate quantity, the total accomplishment in housing betterment in this pre-war period makes history. For the slum dwellers there had been set a higher standard of *living* through settlement work, philanthropic housing, slum clearance and rehousing, limited though it was. For the established industrial worker and for the white-collar workers the standard of the home environment was raised even higher, from that of little more than bare shelter to one including rooms of adequate size and convenience, sunlight, fresh air, gardens, public playgrounds, and many other such community facilities and amenities. The techniques and the standards for thus housing great masses of the population in England which developed early in this century have spread out to modern civilization all over the world.[16] *The home environment had come to be recognized as of the same fundamental importance as the school.* Civilization normally advances by slow steps, rarely by rapid strides. Here surely is an accomplishment that history will class as one of civilization's great strides.

*The Greater Progress After World War I*

"During the world war it had been the practice," Captain Reiss relates, "to class recruits as A-1, A-2, A-3, B-1, B-2, etc." Toward the end of the war the phrase became current, "You cannot make an A-1 nation out of a C-3 population." Emphasis was laid on the fact that one of the most important factors in the existence of a C-3 population was bad housing.[17]

It became *a duty,* under the Act of 1919, for the local municipal bodies to deal with housing needs of their districts, in so far as they were not being cared for by private enterprise or other agencies. To this end the national government through the Ministry of Health was authorized to make *subsidies* to the local authorities and to establish rules for simple and expeditious means of acquiring land, by exercise if necessary of the right of eminent domain and police powers, and to determine the price on a basis fair to the owner and to the public. It decreed that buildings so unfit as to require demolition have no value and, their use being illegal, the owner must pay the cost of demolition. All subsequent legislation has been by way of improving the procedures, including the financing necessary to carry out the intent of this Act. Thus the Act of 1923, designed to stimulate low-cost building by limited dividend corporations, provided for a lump sum grant and the right to sell the projects. It also provided that the annual deficits on slum clearance and

[15] "London Housing," op. cit., pp. 4 and 5.

[16] The late Sir Raymond Unwin (then Mr. Unwin), designer of Letchworth, Hampstead Garden Suburb and a number of other early garden communities, and adviser to the Ministry of Health has been largely responsible for applying these same principles to many subsequent housing projects for the lowest income groups—a method followed not only in England but in all parts of the world.

[17] "British and American Housing," op. cit., p. 32.

rehousing schemes which rehoused former slum populations be borne equally by the owner, which might be the local housing authority, and by the government. All this did stimulate building, but not for those in the very low income brackets.

Need for a more generous subsidy was recognized in the Act of 1924. Following this, "*the Ministry of Health indicated to the trade unions* that there would be a guarantee of steady employment for fifteen years *and that*," even if large numbers of new men were admitted to the building trades, "*there should be no risk that serious unemployment would occur in five or ten years.*" The subsequent increase in the supply of labor and houses was much greater and quicker than was foreseen. The numbers in the building trades increased almost 25 per cent between 1923 and 1927. "It is reliably estimated that the Acts of 1923 and 1924 actually gave employment in 1924 to 200,000 men who would otherwise almost certainly have been unemployed."[18]

In the following decade the government made several moves designed to make smoother and more effective progress toward its housing goal. Subsidies were reduced in 1927 because, it was said, of falling building costs.[19] This did not bring results, so the policy was reversed by the Act of 1930, providing for larger subsidies for the higher priced central land than for outlying vacant land. The act recognized the need for a more vigorous direct attack on the slums.[20] Substantial subsidies were provided for clearance and rehousing on the basis of the number of persons displaced and rehoused. Land acquired through clearance might be used for housing, for open spaces, streets or other public purposes, or might be leased or sold. Islands of existing sanitary houses were permitted to remain in the clearance areas, but clearance was not mandatory and progress was slow. The Act also provided for increased government loans to mortgage associations for working class housing, with an agreement that the associations should reduce their interest rate below the prevailing rate of 4 to 4½ per cent and extend the period of amortization beyond the prevailing thirty years. (Note that even the former rates of interest were lower than those of the loans insured by FHA.) At the same time the Act discontinued the general working class housing subsidies provided in 1923 and 1924. The London County Council in 1931 made special provision for housing the aged, in two-story cottages.[21] (*See Plate XVIII, E.*) All this tended to encourage a switch from clearance sites to outlying sites. In 1933 the Ministry of Health issued an order, virtually mandatory, calling on the local authorities to prepare plans for clearing all slums within a five year period. Many plans were promptly prepared. Private enterprise developed continuously until 1934 when, without subsidy, it built 50 per cent more dwellings than had been built in the peak year of 1927—but always for an income group above the slum-dwellers.[22]

In the great cities a large proportion of the low income group of the population find their occupation in the heart of the city and must there be housed, because of the time and expense involved in transportation to the suburbs. The high cost of land and of the fireproof construction required in the center makes the cost of central housing appreciably higher than in the open suburban or semi-suburban areas. With the available housing already overcrowded, clearance for new buildings raises a problem of interim housing. These two problems are at the root of much of the legislation since 1900: the need for the new and relatively costly central housing, and the immediate necessity for caring for the population in the clearance areas where the new housing was to be located.

Thus the Act of 1935 implemented the clearance of the whole urban area of congested housing. It made over-crowding a punishable offense and reverted to the provisions of the 1930 Act, including its subsidies, but graduating them according to the cost of the land, and making the Ministry of Health responsible for preventing excessive prices. Subsidies on a less liberal basis were provided for projects on outlying open land. The Act also made a new and effective provision for a *Central Advisory Committee* to coöperate with both the central and the local governments in aggressively carrying out the intentions of the Act. The Committee is made up of those directly and indirectly interested in housing—housers, owners, building trades, financing institutions and so forth,[23] but does not specifically call for such a range of membership as the High Council in France—described in the chapter on Housing in France. Here finally was an Act which was definitely effective; and under it a vast program was carried out in all the larger cities, bringing close to a conclusion the approximate riddance of slums in England and making available sanitary and attractive housing to all the people save a few of very lowest income.

Thus while a very considerable portion of London slum areas had been cleared under the legislation which we have outlined, there still remained that group whose handicaps, lack of thrift or asocial ways of life had disqualified them for the new housing, where it was desired to establish and maintain good standards of living. To supply housing for this group legislation was passed in 1938.[24] It provided for increased subsidies, but did not contemplate a special type of housing as in Holland and France.

"It is significant that these acts," (all those passed

[18] "British Government in Housing," Central Housing Committee, Washington, D. C., p. 81.

[19] Ibid., p. 82.

[20] "European Housing Policy and Practice," E. M. Fisher and R. U. Ratcliff, Federal Housing Administration, Washington, D. C., 1936, p. 36.

[21] "London Housing," op. cit., p. 9.

[22] Ibid., p. 84.

[23] Sir Raymond Unwin in "Housing Yearbook," NAHO 1936, p. 160.

[24] Richard L. Reiss, in "Speeches delivered at the Eighth Annual Public Housing Conference in N. Y.," 1939, p. 10.

in the inter-war period) "were passed by parliaments with different political majorities. Those of 1919, 1935 and 1938 were passed by conservative coalition governments. Those of 1924 and 1930 by labor governments. *Whichever party was in the majority there was no difference of opinion that subsidized housing was both a public necessity and in the national interest.*"[25] [Italics are ours.]

The achievements since World War I have been great. In England and Wales, with a population of somewhat over forty million, from the end of World War I to 1937 the number of families for which the housing authorities built new housing was 950,000, while the limited dividend corporations and other organizations, using government subsidies, built an additional 423,000, a total of 1,373,000 *under subsidies*. To match this, in proportion to population, in the United States we would have to build 4,386,250 family units. Simultaneously private enterprise produced 2,249,000 houses for those who could buy them,[26]—a proportional equivalent in the United States would mean about 7,000,000. There were about two hundred thousand more in Scotland—up to March 31, 1938.[27] For London's eight million alone the County Council had built 60,087 cottages (as of 1936) and 36,110 units in block dwellings—a total of 96,197. The slum clearance displaced 140,621 people, of whom 104,026 had been provided for (up to Oct. 1936) mostly by County Council with some assistance from Boroughs, Public Utility Societies and Housing Companies.[28] Following this up to March 1939, another 120,000 dwellings were completed, and 49,000 were under construction. *One-tenth of the families in England live in houses built by local authorities, and in some localities the proportion is as high as one-fifth.*[29]

*The Effect of Public Housing on Health*

Before the 19th century, as we have previously stated, the objectives of slum clearance were to prevent conflagration and "plagues." Advances in the science of *public health* during the 19th and 20th centuries have raised the objectives from a protection against these occasional and uncertain menaces, to include the protection of the daily lives of a great mass of the population, not merely against contagious diseases, but against that low scale of living which undermines general health, efficiency and contentment, and leads to inefficiency, discontent and delinquency. Beyond any question the housing done in Great Britain has succeeded in accomplishing these objectives for the population which has been rehoused. As Dr. C.-E. A. Winslow has pointed out, in a world where so many other changes are taking place, it is difficult to segregate vital statistics which can be referred to with scientific accuracy as definitely attributable to housing alone. Nevertheless some of the figures are most convincing.

Here are some figures from the British experience, furnished by Captain Reiss.[30] Note that the infant mortality rate in new housing is one-half that in former slums and ten per cent less than the rest of the city. The health officer adds: "There can be no possible doubt but that the new housing provided by the city, in itself has produced a continued and very definite improvement in the physical and mental well being of those dwelling in the new estates."

TABLE V. VITAL STATISTICS BEARING ON HEALTH AND HOUSING IN BRITISH CITIES

A. Glasgow. Record of Children's Diseases, 1932, 1933, 1934

| | Knightswood Project | City |
|---|---|---|
| Infant mortality—3 year period. | 49.4 | 102.3 |
| Due to: Respiratory diseases | 4.6 | 29.6 |
| Digestive diseases | 4.6 | 15.3 |
| Infectious diseases | 3.6 | 9.6 |

B. Birmingham. Infant Mortality, 1929, 1930, 1931

| | Birth Rate | Mortality |
|---|---|---|
| Municipal housing, 35,000, over 3 year period | 21.3 | 63 |
| Seven central wards | 21.1 | 94 |

C. Birmingham. Diseases Associated with Faulty Environment, 1930

| | Municipal Housing | Central Wards |
|---|---|---|
| Tuberculosis | 0.87 | 1.48 |
| Respiratory Diseases | 0.87 | 2.48 |
| Measles and Whooping Cough | 0.28 | 0.45 |
| Infantile Diarrhea | 4.8 | 13.9 |

D. Manchester. Infant Mortality, 1935

| | Population | Infant Mortality Rates |
|---|---|---|
| Low rent housing estates | 92,714 | 61.2 |
| Twelve slum areas, five years average before clearance | 37,700 | 120.4 |
| City | 776,028 | 71.3 |

The school records indicate a more general improvement in living. For the Headmaster of the London Road School reports: "Cleanliness and improvement in nearly all cases. Sociability: . . . distinct advance is evident, particularly in younger children, between five and seven. Intelligence: practically all the children were from one to two years behind when they entered this school and were mostly dull and backward. I should say that fifty per cent of them have noticeably improved in general intelligence."[31] It may be argued that the municipal housing often meant lower rents and thereby left more of the family budget available for better nourishment, which in turn was reflected in better health, mental alertness and re-

[25] Richard L. Reiss, op. cit., p. 10.

[26] "Financing House Building for the Lower Classes," International Housing & Town Planning Congress, Paris, 1937, p. 12, Sir Harold Bellman.

[27] Reiss, op. cit.

[28] "London Housing," op. cit., pp. 258–262.

[29] Catherine Bauer in Release 416 USHA, Nov. 1939.

[30] "British and American Housing," op. cit., pp. 73, 74, 75.

[31] Ibid.

sistance to diseases. The answer is that the housing policy deliberately included an adjustment of rent to the family budget, with a subsidy if necessary, for the very purpose of assuring an adequate allowance in the budget to secure good nourishment and other essentials, in addition to a sanitary and wholesome environment, including such quiet as is conducive to good sleep and the consequent mental alertness. In short, the British subsidy is to the family and based on all its needs—not a subsidy fixed on the housing unit occupied by the family, as in USHA housing. (*See section on Family Budgets, p. 128.*)

There is special interest in the vital statistics for the garden cities of Letchworth (established some thirty-five years ago) and of Welwyn (established some twenty years ago). In the table they are compared with the garden suburb of Wythenshawe (Manchester), Manchester slums, and England and Wales as a whole. While, in interpreting the figures, allowance must be made for the fact that Letchworth,

TABLE VI. VITAL STATISTICS OF GARDEN CITIES AND GARDEN SUBURBS COMPARED TO OTHER AREAS

| Mortality | General | Infant (per 1000 born) | T.B. (per 1000 living) |
|---|---|---|---|
| Letchworth | 8.0 | 33.6 | 0.38 |
| Welwyn | 5.9 | 25.0 | 0.574 |
| Wythenshawe | 7.86 | 60.0 | 0.72 |
| Manchester Slums | 17.32 | 120.0 | 1.97 |
| Manchester City | 12.95 | 71.0 | 1.04 |
| England and Wales | 12.00 | 62.0 | 0.804 |

Note: The figures are the average for the last five years which were available (as of 1938).[32]

Welwyn and Wythenshawe are newer communities, the general picture presented seems to justify the comments in the report from which they are taken. "Expressed in terms of economics, they represent a great saving in national assets. The rock-bottom asset of any country is the healthy human lives in that country. . . . under Garden City conditions, it would not be unreasonable to hope that 20,000 infants would be saved every year." Of tuberculosis it says, "Its ultimate conquest will depend largely, however treatment advances, on good food, healthy surroundings, and good social conditions of life."

*Standards of Living and Types of Subsidies*

The English working class is thrifty and industrious, and when conditions are not too discouraging, the women are good housekeepers. Compared with the same class in the United States, they are less exacting as to modern conveniences, yet this writer feels that it may well be questioned that there is justification for a commonly accepted idea that the so-called "American Standard of Living" is higher than in England and some other northern European countries. The English and most Europeans make much more of home gardening, the cultivation of both flowers and vegetables. I would say that more of the English enjoy out-of-door sports and games, particularly those that the family can play together, such as croquet and country dancing, as well as such vigorous games as tennis, cricket and bowling on the green. The throngs which in the U. S. watch professional baseball games of a Saturday afternoon would in England largely be enjoying their own out-of-door sports or hobbies. Considering their gardens and their outdoor life, the standard of the amenities of life may well be said to score higher in England than in the U. S. Then too, English standards of personal cleanliness and of clean and well-aired houses among people of low income must be compared with the standards of housekeeping of the corresponding group of people in the U. S. Despite the fact that those in the U. S. have more accessories to make housekeeping easy, more radios, more automobiles to get about in, I question if they live more healthfully or on a higher plane than or even as high as the same class in England.

The proportion of the regularly employed English working-man's wage which goes into shelter rent (including water) is about one-sixth (16.6 per cent), toward which all members of the family who work contribute (from the age of 14 to 65). The Housing Center, an unofficial organization, contends that in order to maintain a proper scale of living, no family should have to spend more than one-seventh (14.3 per cent) of his wage in rent.[33] The difference between one-sixth of income and one-seventh would, in the case of government aided housing, be made up in the subsidy. The government's position is that only those in the slum clearance areas need the subsidy—that private enterprise can provide for the others. The United States Housing Acts assume one-fifth (20 per cent) of the income as complete rent (including utilities) or one-sixth (16.6 per cent) in the case of a large family, which in terms of shelter rent would be about 17 per cent and 14 per cent respectively. Cost of heating in cities in our northern states is three or four times that in England, and this is reflected in higher rents. It is a significant fact that the unskilled laborer in England gets higher wages in proportion to skilled labor than does the unskilled laborer in the U. S.; in England the unskilled laborer gets three-fourths as much as skilled labor; in the U. S. he gets only one-half as much.[34]

The national and local subsidies for the reduction of rents are in the form of annual payments and effect an average reduction of about 20 per cent. *There is no tax abatement.* The *subsidies* need not be applied uniformly to all families in any project, but *may be de-*

[32] The table is a composite of tables in "Health and Garden Cities," pub. Garden City and Town Planning Ass'n, London. For comments and further quotations see NAHO News, Vol. 2, #1.

[33] "Rents for the Working Classes," p. 117 and 118. A Report of the International Housing and Town Planning Conference, Paris, 1937.

[34] British and American Housing, op. cit., p. 35.

*termined on a sliding scale in proportion to their needs.* Some of the systems in use by different authorities are shown in Table VII.

TABLE VII. DIFFERENT SYSTEMS OF APPLYING SUBSIDIES

(a) Standard or *maximum rent subject to rebates*:
  (1) On incomes between a certain upper and lower limit fixed percentage;
  (2) A percentage on the amount by which the income falls below a fixed scale.
(b) *Minimum rent*, which is *increased according to a fixed scale*, until an upper limit is reached.
(c) *Subsistence Scale*, balance deficit available in whole or in part on payment of rent. This ties in the rent relief with all other relief items, and should simplify all public relief administration.
(d) Rent to be *fixed percentage of income*, with deduction for children.
(e) *Rebate for children only*.[35]

*Standards, Types and Quality of English Housing*

The broad principles for housing in Great Britain are laid down by the Ministry of Health and set a standard which is high compared with previously existing conditions or with standards of new housing in most, if not all, European countries. But, in effect, says the Minister of Health, this does not represent any ideal, but *the minimum which is tolerable* and capable of early enforcement.[36]

One of the most fundamental determinations of the Ministry is the amount of space needed by families—small families, large families, families of one or several generations. Each dwelling must be of such size that there shall be no more than two people per room, excluding kitchen, bath, etc. (not counting a baby under one year, and counting a child under ten as one-half person). Rooms used for sleeping must be sufficient to meet the requirements that no persons ten years old or more, of opposite sex, not man and wife, may sleep in the same room. There must be a living room, a kitchen, a bathroom, a toilet. As of 1936 the recommendation for the minimum gross superficial area of dwellings were: for a family of five 760 sq. ft., for a family of six 850 sq. ft., for a family of seven 1130 sq. ft. The minima recommended for individual rooms for families of from five to seven were: living room from 150 to 220 sq. ft., for #1 bedroom 150, for #2 bedroom 100 to 120, for #3 from 80 to 100. In stating the number of rooms in a dwelling the British do not count the kitchen (scullery). A good volume of air is assured by a ceiling height of 8.5 ft. (only 8 ft., however, in the attic of a "maisonette").[37] In this connection it should be borne in mind that London is in the latitude of 52°29′, and has on the average but 4.01 hours of sunshine a day, and that in the more northerly cities the days are even shorter and the sun paler.

[35] "Rents for the Working Classes," op. cit., p. 119.

[36] "London Housing," London County Council 1935, p. 32.

[37] "Housing—A European Survey by the Building Center Committee," Vol. I, 1936, gives complete data on all phases of housing, physical, social and financial. A number of our illustrations of British and of European housing in the plates are from this book, reproduced at a smaller scale.

There are other basic requirements and characteristics of British housing. The buildings, being but two rooms deep, all rooms, including the toilet and the bath, must have outside windows. To assure good light, in London County for 40 ft. streets the ratio of height of buildings to width of street is 1:1; 1¼:1 for streets from 40 to 60 ft.; 1½:1 for streets from 60 to 80 ft.—the narrower width of streets being for single family houses. All of these ratios are subject to variation as conditions may warrant. No building may project above a line drawn from the center of the street at an angle of 45° with the horizontal. Heat is needed only to temper the mildly cold weather, and for all rooms, except the kitchen, heat is supplied by one or more fireplaces. One of these is in the living room, and in houses built prior to 1937 there was a device for heating a water boiler. It is this local heating which accounts for the many chimneys and for the lack of cellars.

In the London County new type plans of 1937, gas hot water heaters are supplied in the kitchen; the toilet is in a separate compartment—except in one-room and two-room dwellings, in which cases no wash bowl is provided; discontinued since 1934 is the location of the bathtub in the kitchen or in a bathroom approached through the kitchen, as in the China Walk Estate. *See Plate XX, E, p. 70.* Common laundry rooms are provided at the rate of one for every three families, so that *each family may have the exclusive use of the space for two successive days in each week.* The space allotted for this use, in the four-story blocks is the equivalent of a one-room dwelling, and in five-story blocks, the equivalent of a two-room dwelling.[38]

In multi-family urban houses the exterior "access" gallery, with exterior stairs, appeared early in the period of "reformed" housing and persisted up to 1937. Those galleries were economical but had their disadvantages, shading the windows below them, and involving a lack of privacy and quiet in the rooms adjoining them—particularly at night. In the new type of plan, adopted by the London County Council in 1937, the gallery was superseded by an interior hall and stairs. On each stair landing is an opening into a dust chute—in a plan of the old type it might be necessary to travel the length of the gallery to get to one. The new type plan also calls for a balcony in each apartment of more than two rooms. The original idea was to have the balconies recessed (see plan) with glass pavement-lights in the floor, but the view of Pullman Court, *Plate XIX, H, p. 69*, shows another disposition with a cantilever concrete slab, such as had been in use in Denmark and a number of other countries.

Most housing estates have been located on the outskirts of the towns, where, under zoning restrictions heights are limited to a maximum of between 50 and 100 feet and where no building may project above a line drawn from the center of the street at an angle of

[38] London Housing, op. cit., p. 42–47.

45° with the horizontal. Within the project the angle between the base of one building and the top of the opposite building commonly varies from 10° to 40°, according to the density. Density in the cottage estates, in open areas, is set at 12 families per acre, though some sections of an estate may be appreciably higher. In the central areas of the very large cities there is no rigid standard for density, which varies from twenty to sixty-five families per acre, and the buildings are from three to five stories high so that they can accommodate approximately the same number of people as were in the area before clearance, and still maintain a good spacing between the buildings. The upper two floors are frequently arranged for two story "maisonettes," the bedrooms being on the top or "attic" floor. *(See Plate XX, E and F, p. 70.)* While there is a preference for placing the living room on a southern exposure, no principle of orientation for sunlight has set its stamp on the grouping of buildings, such as that, prevalent at one time in Germany and Sweden, of planning buildings in rows running north and south so as to receive either morning or afternoon sun in every room—although the chairman of the Committee on Housing and Public Health of the London County Council in a report on continental housing comments on such a prevalence.[39]

The pooling or "decanting" houses, such as the East Dulwich Estate, *Plate XIX, D, p. 69*, located on the edge of London, are of a special type. There the population from the central slum clearance areas is placed pending completion of the new project, during which time the families are under observation to determine which, if any of them, might be undesirable in a new project. When the new project is completed the desirable families, constituting the great majority, move out of the pooling houses and the group from another slum clearance comes in. The few "undesirables" remain for another period of probation. These houses were built prior to the Act of 1938, which facilitated the building of special projects for the "undesirables." As even the "decanting" houses had but a short experience prior to the outbreak of war, we cannot yet know the extent to which the "undesirables" will react to their new environment. On that point we shall have to look to Holland's longer experience. However, in the average English project, of all the people who had formerly lived in bad slum conditions, 90 to 95 per cent have made good tenants and neighbors.

In the "cottage estates," which are the preponderant type, the dwellings are mostly in rows, two stories high and two rooms deep, with gardens front and back. They are built of the materials most available in the locality, usually brick for walls, red tile for roofs and enough other materials to add variety, which is further enhanced by variations in the slope of roofs and in types of chimneys. Because the cost of land and construction is less in the suburban areas, it has been possible to include for the larger families a parlor, in addition to the living room. *Plate XX B, p. 70.*

It is interesting to look into a variation from the foregoing types—a type neither metropolitan nor suburban. Newcastle-upon-Tyne, with a population of 293,000 is among those fifty or more cities of England having a population from about one hundred thousand to one million. Owing to the influence of Scotland across the Tyne, the older housing had taken the form of flats in two story row houses. *Plate XX C, p. 70.* This resulted in an unusually large slum population, with a heavy mortality from tuberculosis and other diseases associated with over-crowding. From two to two and one-half new houses properly spaced were required for each old house demolished—against one new for each old one which is the average for England as a whole.[40] In the new housing in Newcastle "the cottage with a garden has always been most favored and has been justified by experience," writes the city architect, who continues, "It is recognized, nevertheless, that certain workers, notably dock laborers, must live within easy reach of their employment. . . . A plan which effects a compromise between the cottage and the tenement block, and yet is reasonably economical on expensive land, has been used on certain slum cleared sites." The advantages claimed for them are economic construction, family insulation and the possible adequate spacing between the buildings. Another special type of building was planned for aged couples.

The social and communal features of housing, such as the nursery schools and organized recreation have not often been included in British public housing. In Downham Cottage Estate, however, are a number of such features. At least one of the best advisers of the London County Council feels that this is a shortcoming which they will ultimately have to correct, particularly in the more congested districts.

Pointing the way toward such developments is Kensal House, a small estate (68 flats on 1½ acres) built by the Gas Light and Coke Company in Kensington, primarily for its employees, with rents fully as low as in public housing, yet adequate to cover cost, including the return upon capital borrowed. Social features included a model nursery school, in a separate building; for children from seven to seventeen years of age there are outside playgrounds and three inside rooms (for ages 7–9, 10–13, 14–17) used by boys and girls alternately. For the adults there is an outside terrace and a roof garden, a large club room with snack bar, rooms for making and mending furniture, for repairing shoes, for sewing, etc.[41] Interesting features of construction are: (a) outside walls of 4 inch concrete

[39] "Housing, Working Class Housing on the Continent and the Application of Continental Ideas to the Housing Problem of the County of London," Lewis M. Silkin, M.P. 1935, London County Council 1936, p. 6.

[40] These paragraphs on Newcastle are based on "Housing at Newcastle upon Tyne," R. G. Roberts, F.R.I.B.A., City Architect, in "Housing and Town Planning," 1938. No. 1.

[41] "Kensal House, a contribution to New London," Capital Housing Association, Ltd., Horseferry Road, London, S.W.1., 1937, in which much data as to social features and management are given.

(on the usual concrete frame) with outside surface of Masonite Presdwood (painted with concrete paint); inside surface of 1 inch cork finished with plaster; $5\frac{1}{2}$ inch continuous hollow floor tile spanning the beams and receiving sound deadened floor finish. The entire scheme was developed by a team of six architects experienced in housing design, headed by Mr. E. Maxwell Fry, with Miss Elizabeth Denby as consultant.[42]

The fact that British housing has been designed for a minimum life of sixty years has given it a character of permanence. The architecture of the block housing done by the local housing authorities, at least in the Metropolitan areas up to 1938, was in general dignified and interesting, often strikingly so, albeit the lag of tradition is in evidence—as witness the high pitched roofs on five story buildings. *Plate XIX C, p. 69.* But for the most part, prior to 1938, this urban work lacked the allure of some of the work in other northern European countries, where the design has often been of greater simplicity and a more direct expression of modern materials and methods of construction. In London these qualities appeared first in the work of private corporations, despite the fact that the Council engaged architects of distinction, such as Mr. G. Topham Forrest and Mr. E. P. Wheeler. But, as will be noted in the illustration, lately this trend has changed. *See Plate XIX, p. 69.*

A clue to the difference in design may lie in the fact that the work of the local authorities has been done largely in large architectural bureaus—not the best atmosphere for independent thinking and creative design, whereas that of the private corporations has been done by architects in private practice. Pertinent at this point may be remarks by Mr. Roberts in his article on Newcastle housing: ". . . the danger arising from the general adoption of the virtually standardized state plans which are used as the basis for granting state assistance. Such plans do seriously predispose to the mass production of houses to a general external pattern. It is only those localities fortunate enough to possess materials of charm, or an architect of ability, who are able to avoid the stigma of such pattern."

As to the garden estates and the cottages in them, their architectural expression stems from the tradition of the ancient English village, *Plate XVIII, A, p. 68,* an admirable example of the "seed bed of civilization." Wisely in the new estates this traditional character of neighborliness has been preserved, though set in a physical environment adjusted to our age. In the construction of cottages there have not been such radical changes in the materials and methods as in the heavier semi-fireproof urban buildings. To assure that openness in the grouping of buildings which is necessary for a good movement of air, good outlook, space for shade trees and shrubs, gardens and playgrounds—to assure these, the density is normally limited to about 12 families to the gross acre (which includes roads and other open spaces). The station, stores, schools, churches, recreation centers, and other community features, are usually in groups centrally located on ample main thoroughfares. The use of winding roads results in a greater variety and interest in the streets and prevents the monotony of straight unbroken rows of houses; a due regard for natural topography leads to avoidance of steep roads and steep house sites; the cul-de-sac is used in the economic adjustment of space and adds further variety. The paved roadways on dwelling streets are limited in width to actual needs, sometimes for two lanes of traffic, sometimes for only one, with ample space for shade trees and sidewalks. Such streets do not invite general traffic, but assure a maximum degree of privacy. Street intersections are frequently opened up about small planted spaces; ravines, streams and ponds and other natural features are preserved and developed. Both architecture and landscaping are conceived in the intimate scale of the ancient village and in restrained taste. Through all these means the entire neighborhood becomes the extended environment of the family, contributing to a healthful, happy, contented and loyal citizenry. These garden suburbs, in which the English were pioneers, have set a high standard and have been an inspiration for good suburban planning throughout western civilization.

Rehousing of people of the rural areas has from the start been a need recognized by the British Government, which has extended to the village authorities advantages similar in their nature to those offered the urban populations. The population involved is relatively small and the individual units are scattered over the countryside—so it has not attracted attention.

No picture of British housing would be complete without a word about Welwyn Garden City, *Plate XVII, p. 54,* a more recent development (1920) along the lines of Letchworth, but profiting by the experience of the earlier city. About twenty-five miles from London it is near enough to afford reasonable access to the advantages of the great metropolis—which is important to the local industrialists as well as to the residents who may wish to commute for cultural advantages or for business. The housing in Welwyn, which includes some for very low incomes, represents the best that is in England. The Garden City itself represents the highest ideal yet achieved in the realm of satellite cities. Incidentally, Captain Richard L. Reiss, so well known to Americans in the housing field, has from the start been a guiding spirit and, at least up to World War II, was the chief executive in the development of Welwyn, to which he brought his experience as a trustee of the older Letchworth and Hampstead Garden Suburbs as well as his experience with the Ministry of Health and with the London County Council since 1916. Mention also should be made of Wythenshawe, a recent extension of Manchester, the most extensive of the garden suburbs.

[42] Structural features are given in "Kensal House," Ladbroke Grove. Also a Mimeograph from same office.

The most important implement for post-war housing is the Town Plan Act of 1944, whereby interior slum areas, notably those demolished by bombs and rockets, and also areas in outlying districts may be acquired by the local housing authorities. Jacob Crane, special assistant to the Administrator, National Housing Agency, made a two months' study of conditions and plans in England and another month's study in France and Italy. An outline of his studies was presented to a meeting sponsored by a Special Citizens Committee of Washington, D. C., Feb. 19, 1945.[42a]

## Housing in Holland

### *The General Picture*

Holland has a more nearly completed housing program than any other country in Northern Europe. In 1901, when she set out to rid herself of obsolete and unsanitary housing, she had some experience of her own and the benefit of half a century of British experience in legislation and administration and the benefit of the admirable technique which the British had developed in the planning of garden suburbs.

The fact that Holland is a small and homogeneous country has facilitated the carrying out of her housing program and makes it an excellent field for the study of comparative results. When Holland passed the Housing Act of 1901 her area was about 22 per cent that of England,[43] the actual population was about 16 per cent, and the density of population about 85 per cent of that part of England outside of the greater police area of London (with its 8,000,000 people in a little less than 700 square miles). Like England, Holland had extensive colonies and foreign trade, diversified industries in a number of large cities; fisheries and some coal mines, and more extensive agriculture than England, including the world's largest nurseries for flowers and decorative plants,—fewer extensive parked estates. The national per capita income amounted to 72.7 guilders, the purchasing power of the guilder being about equal to the dollar. Despite some racial admixtures, the people are as a whole unusually homogeneous. The Dutch are thrifty and, like the British, great lovers of gardening and out-of-door life, to which the same mild climate is conducive. Public education, under control of the government, was general and of a high quality, the government was strongly democratic. The people too are markedly democratic, and in motoring across the countryside, through villages and into large cities, I was impressed with their sturdy independence. These conditions and qualities undoubtedly had a bearing on the directness with which Holland attacked her housing problem and upon the unfaltering execution of her program.

### *Outline of Legislation and Administration*

The Housing Act of 1901 (which included the Town Plan Act, *see p. 75*, and the Public Health Act), was in operation up to the invasion of 1939, with only a few minor modifications. The act *required* municipal authorities, large and small, to devise codes for the demolition of unfit buildings, for the proper maintenance and use of all fit buildings, for the production of new buildings; it *authorized* them to take land, to make grants and loans to those coöperative societies and investment companies which built houses exclusively for the working class. In event of the failure of local authorities to act, *the provincial authorities might act for them.*[44] Such complete general legislation was not achieved in England until the act of 1935, and for the asocial groups not until 1938.

The Act further provided for *national loans* to the local authorities *amounting to 100 per cent* of the cost of the project, and with *interest rate* corresponding to that *paid by the government* (originally 4 per cent, in 1939 3½ per cent),[45] *to be amortized as to building costs in 50 years, as to land costs in 75 years.* This difference between the amortization period on the building and on the land was obviously a logical one—one which, incidentally, the federal agencies of the United States might do well to observe. During World War I, owing to a housing shortage aggravated by high costs of building and a great influx of refugees, there was allowed, in addition to the 100 per cent loan, a housing grant not to exceed 30 per cent of the building costs plus a subsidy sufficient to make good the deficiency in running expenses, based on the desired low schedule of rents.

This schedule sets a limit of 50 florins for one dwelling, except in case of families with six children below sixteen years, in which case it was 75 florins.[46] But even this was not enough to overcome the shortage. In 1920 premiums were provided for houses for the manual workers and middle classes, amounting at the peak, in Amsterdam, to as much as 2,500 florins, elsewhere to not over 2,000. This was reduced to 300 during 1923 and discontinued before 1925. In addition to this, the government granted first mortgages not to exceed 90 per cent of building costs (less the government premium) at 6 per cent, and short term second mortgages for houses of limited size. There was no tax exemption.[47] The rent was determined

(*text cont'd on p. 72*)

[42a] This was reproduced as NAHO Publication OR 55, "Why the Nation's Capitol Should Lead the Way in Planning and Housing," by Jacob Crane, Nat. Assoc. Ho. Officials, 1313 E. 60th St., Chicago 37, Ill.; British Policies, p. 9–12.

[43] Since this time she has added 77 sq. miles of polder land through reclamation, with 207 more nearing completion. The total area now is 12,704 sq. miles with 2000 more in process of reclamation; population 8,639,595.

[44] Arthur Shadwell, in "Housing," Encyclopedia Britannica, New York, 1911, p. 826.

[45] Mr. Jan Bommer, Director of Nat'l Housing Council of Netherlands, in address before Nat'l Public Housing Conference, New York, April 1939, p. 3.

[46] A florin (or guilder) in foreign exchange is worth something over fifty cents; in domestic use "it buys about as much housing as would a dollar in this country." Bommer, op. cit.

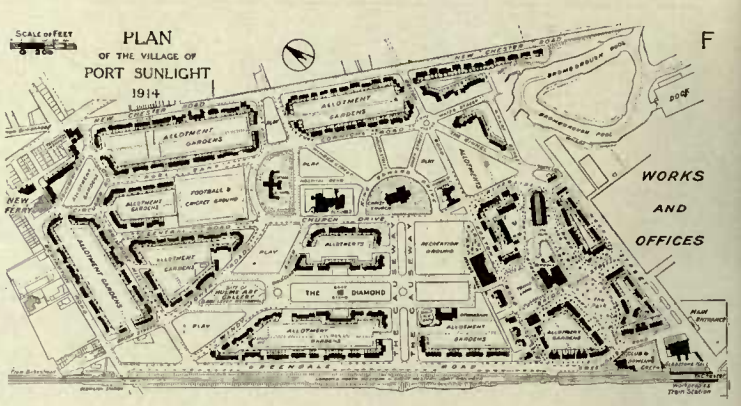
[47] Arie Kepler, Director Amsterdam Housing, in "Financing House-building for the Lower Classes," also "Rents for the Working Classes," Reports of the International Housing and Town Planning Congress, Paris, 1937.

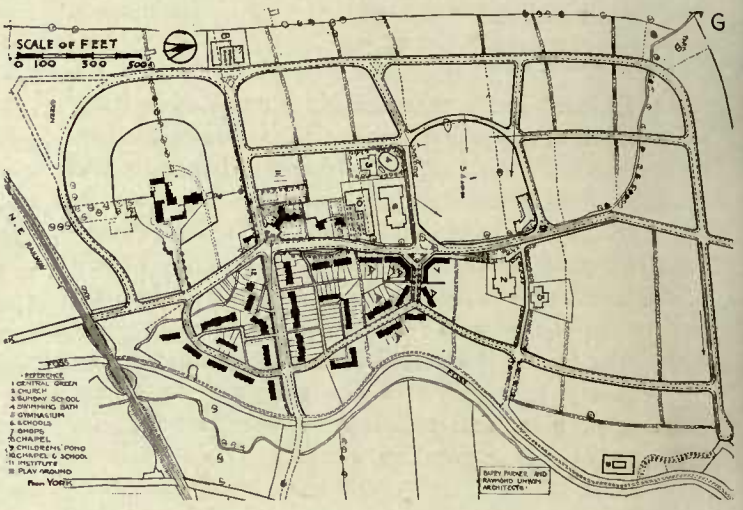
# PLATE XVIII. ENGLAND. 2. SUBURBAN HOUSING ESTATES, PRIVATE AND PUBLIC





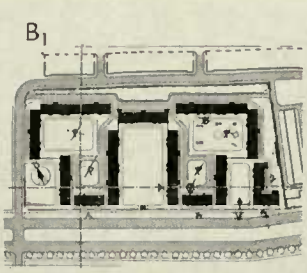






A1. The ancient village, whence stem garden suburb and cottage estate design. A2. Old hamlet of Burnham Overy. B–E. Views in modern housing estates. B. Downham, London County Council (L.C.C.). *See plan I.* C. Roehampton, L.C.C. D. Welwyn. Cottages at medium rents. E. New Castle, a group for the aged. F & G. Industrial garden villages. F. Port Sunlight, 1887, adjoining factory. G. New Earswick, 1905, remote from factory. H. Weoley Castle Estate, Birmingham, 1931–33; 312 acres, coverage 10%, density 43 (families). I. Downham, L.C.C., 1924–30; detail showing allotment gardens; 79 acres, coverage 16%, density 87 in cottages and flats.

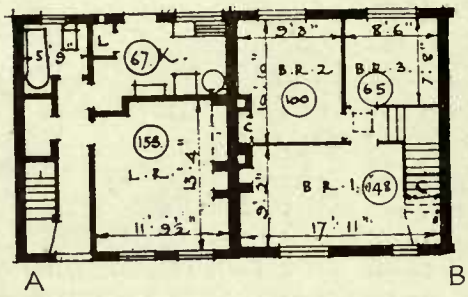


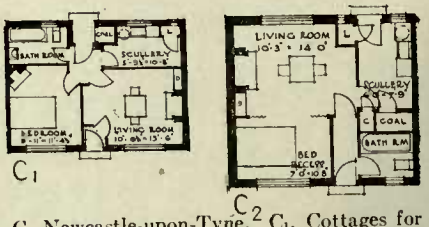




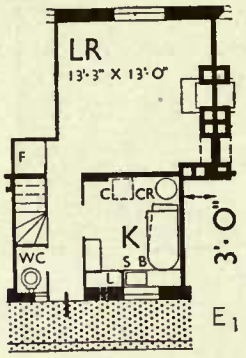



A. New Castle-on-Tyne. Typical housing of an earlier industrial era. B. 1933. Liverpool, Speke Road Gardens. 5 acres, coverage 19%, density 209. $B_2$. Note location of three 2-story buildings. Stairs and access galleries are on the far side. $C_1$, $C_2$. 1928–34. L.C.C., China Walk. *See plan Pl. XX, Eng. 4, F.* G. T. Forrest, Arch't. D. 1936. London, East Dulwich. Note access galleries and structures at foot of stairs to receive dust from vertical chutes. E. 1934. L.C.C., Eastman House, both access galleries and private balconies. F. Circ. 1937. L.C.C. Arbour House, a modification of type plan of 1937. B. J. Belcher, Arch't. G. Circ. 1937. Liverpool, Brunswich Gardens. L. H. Keay, Arch't. H. Circ. 1938. London, Pullman Court. Built by L.C.C., now privately owned. I. 1931. London, St. Peter's Houses, by the Kensington Trust. T. Smith-Shearer, and Cameron Kirby, Arch'ts. J. 1937. London, Kensal House. Company housing; note drying porches (with concrete grill).

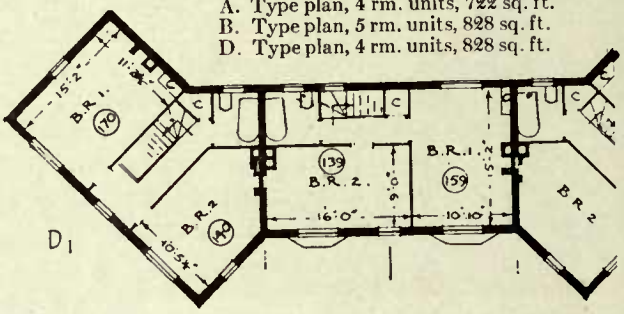



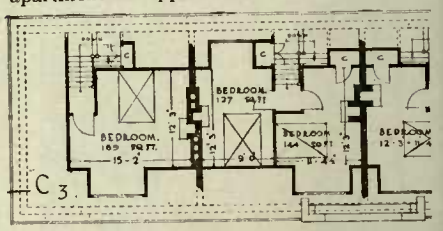



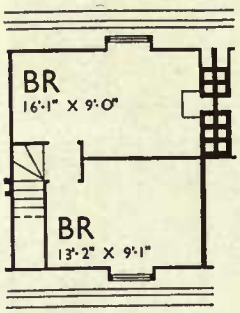

C. Newcastle-upon-Tyne. $C_1$. Cottages for aged couples. @ 396 sq. ft.; $C_2$. @ 350 sq. ft. *See Plate XXVIII, E.* $C_3$, $C_4$, $C_5$, $C_6$. Stairs at end of building serve 2-story apartments on upper floors.

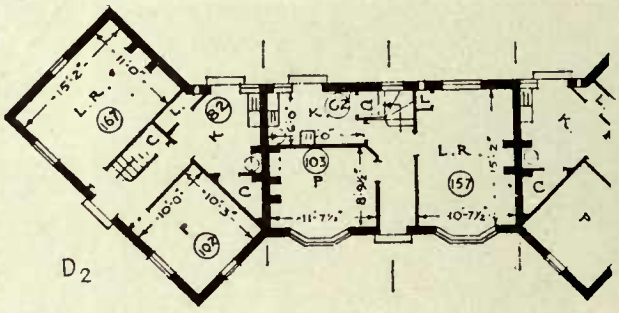


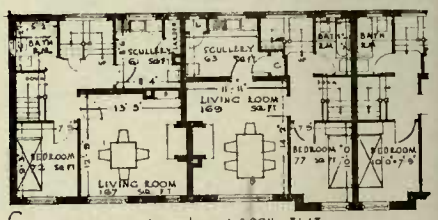

A, B, D. For cottage estates, London County Council.
A. Type plan, 4 rm. units, 722 sq. ft.
B. Type plan, 5 rm. units, 828 sq. ft.
D. Type plan, 4 rm. units, 828 sq. ft.

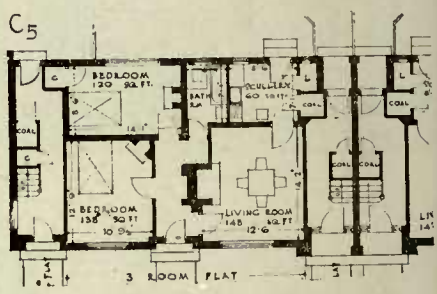


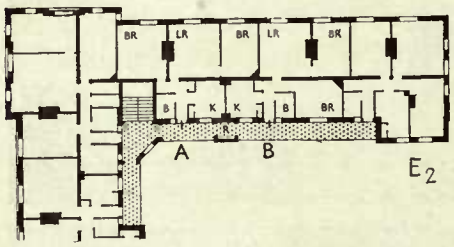



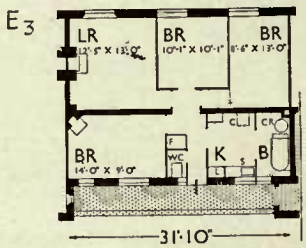



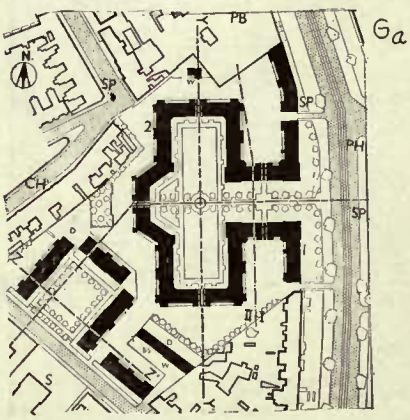



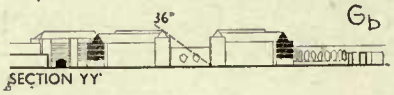

E. 1928–34. Lambeth (London) China Walk. 5.4 acres, coverage 22%, density 206. $E_1$. 2-story maisonette. $E_2$. Typical arrangement of public stairs and access gallery. $E_3$. Type F. note location of tub, also in $E_1$, and compare with F, below. Archt. G. T. Forrest. F. 1937 type plan. (London County Council.) Note location of tub, wash bowl, and w.c.

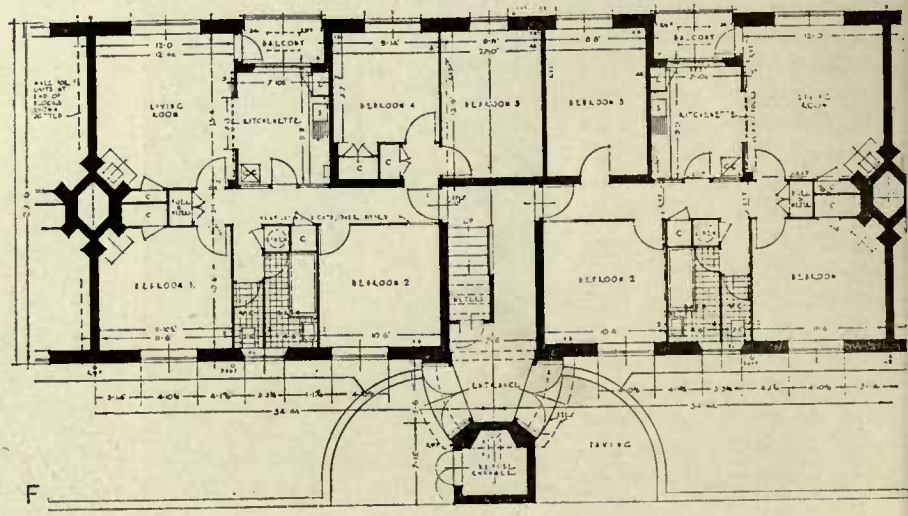






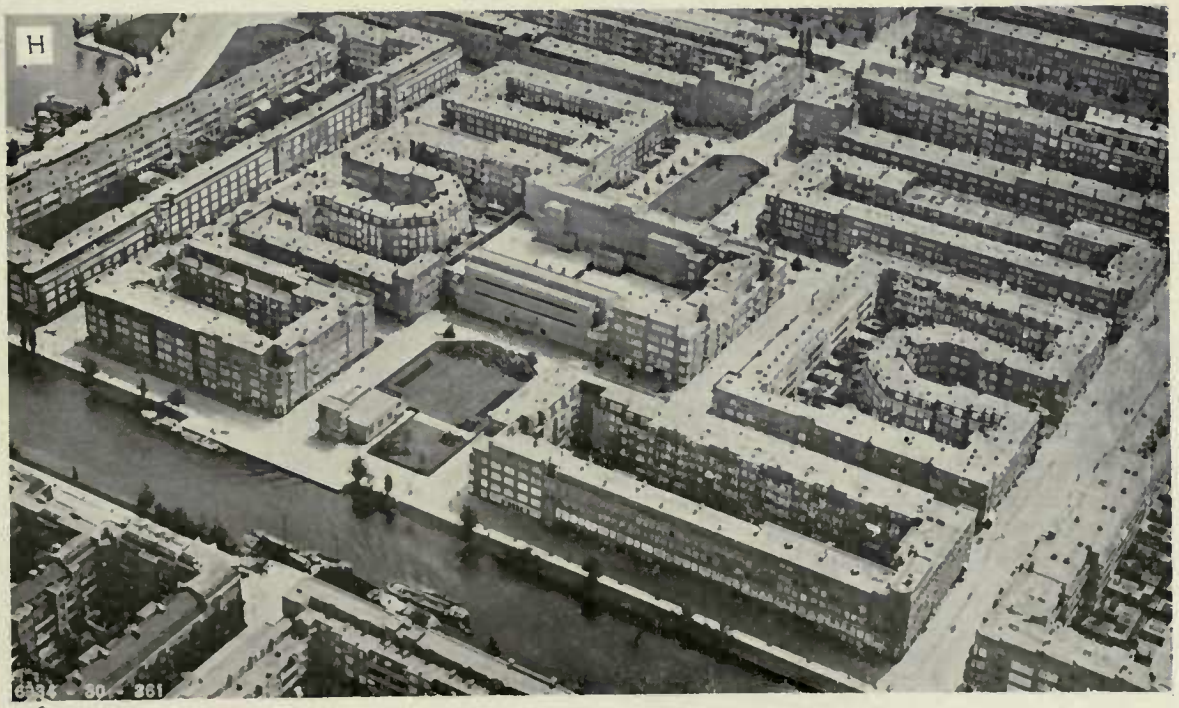














$A_1$, $A_2$. Central Highways, old style.
B. Old residence transformed into tenements.
C. The Radkin, canal changed to parking space (upper center).
D. Curved residencial street.
E. Apartments in shopping center.
F. The Jewish quarters.
G. Near the center.
H. Amstel Canal, an early redevelopement area by a public utility corporation. Note school in center and completely enclosed courts.

exclusively on the basis of "objective considerations" not the "circumstances of the tenant." During World War I the other method was tried but finally discontinued, partly because of the difficulty of ascertaining the tenant's income, partly because of jealousies arising among the tenants—quite different from British experience.[48]

Outstanding characteristics of the Dutch housing program are (a) that it has envisioned from the start *demolition* of unfit houses and erection of *new houses for all classes in need of them*, rural as well as urban, from the middle class to the very poorest relief worker, the single, the married and the aged; (b) that these houses for the various income levels were *constructed* by official *municipal authorities*, *public utility societies*, and *investment groups*. "Responsibility for housing programs rests not only on the Government of all states but also on the citizens. They may organize themselves into public housing societies. This means in short: centralization in regulation; decentralization in execution; enlistment of the zeal of the inhabitants."[49] This zeal is conducive to thrift and to the ambition to participate in ownership through the coöperatives. Incidentally in the United States those below the FHA income group do not have this incentive.

*What Part Does the Municipality Play?*

The *municipalities* acted as clearing houses, as agents for the government, to which they were responsible for the loans negotiated for societies and investment groups; they also erected certain projects on their own behalf *and acted as directors and supervisors of the entire local program.* They did the slum clearance and built the projects for the former slum dwellers. The local authorities have the right, should good cause arise, to take over at any time the property of any society, together with all its obligations. Thus, at all levels, the housing program, both private and public, was integrated through municipal control. In the United States our low cost urban municipal housing is suffering for the lack of just such integration.

The possibility of taking over property was not looked upon as disadvantageous to the municipality, for after the 50-year amortization period had passed the carrying charges were reduced by the amount of the interest on the investment (from $3\frac{1}{2}$ per cent to 4 per cent), which would increase the income by that amount—or would enable the municipality, if it so desired, to reduce the rents correspondingly. By 1939 some of the projects had already run for thirty-five years, with only fifteen years to go.

[48] "Rents for the Working Classes," Section on Holland by Nederlandsch Instituet voor Volkshuisvesting en Stedebaum, Amsterdam, Internat'l Housing & Town Planning Congress, Paris 1937, p. 167.

[49] Bommer, op. cit., p. 2.

There was another factor bearing on the investment. Municipalities in Holland have for centuries pursued a policy of buying up large tracts of open farm land strategically located about the edge of the city so that they might control the orderly growth of the city. Thus there was available, for new municipal housing, abundance of land at low costs. The land was available also to private enterprise for the same type of housing, if it conformed to municipal regulation. Sometimes the land was sold outright, sometimes leased. This helped to maintain land costs at a minimum, thus keeping the total investment on a sound basis—and helped to control the expansion of urban areas on lines established by the city plan. Since 1890 Amsterdam has also pursued a policy of purchasing *centrally* located land at market prices and of permitting the private development of it if in the public interest.

The Municipal and Housing Societies operating under the direction of the local authorities produced in 1939 220,000 dwellings, caring for 15 per cent of the lower income group of the national population (8,640-000) and 22 per cent of that of Amsterdam.[50] Private promoters built dwellings for workmen only when the promoters had available funds without borrowing, and so had no charges to pay for loans.

In the open country and rural districts most families owned their own homes, often no better than slums. Such families could obtain from the government not a subsidy but a lump sum grant. This could not exceed 300 florins, to which the local authority was required to add a like sum. In addition to this there were available government loans to amortize within 30 years.[51]

*Public Utility and Coöperative Societies*

In the development of housing in Holland the Housing Societies, otherwise known as Public Utility Societies and Coöperative Societies, were a very important factor. These were non-speculative limited dividend groups, certified by the government, each of which built for the use of its own members a project which in its entirety remained always under joint ownership. A group organized, prepared tentative plans for their project, submitted them to the municipality, which, if it approved, submitted them to the government, and if the government approved, a *government loan was made to the municipality.* After the approval of the project by the City Council, the money was lent *by the municipality to the society.* The Society proceeded under guidance of its own architect, subject to municipal inspection; the management remained with the society, acting through its own committees, under municipal supervision. Membership was normally made up of public employees, and of employees of the building, garment and transportation industries, etc.—"workers earning decent average wages." In

[50] Bommer, op. cit., p. 6.

[51] Kepler, "Financing, etc.," op. cit., p. 7.

some societies there was a sprinkling of intellectuals. "The membership has developed a high sense of initiative, responsibility and competence in this field, which in turn is carried over into the field of citizenship." Those houses produced before the high price period of World War I were self-supporting. The *coöperative societies* form the majority of the one thousand public housing societies, were the driving power of the Dutch housing movement and have *produced 75 per cent of all the new housing in Holland.*[52] Here again is an important method of producing housing which, as yet, we in the United States have used to an almost negligible degree, though enough to prove its applicability. *See p. 173.*

*The Comprehensive Program*

The Dutch have seen clearly that incidental to slum clearance and the building of new houses are two other serious problems, namely temporary housing and a restudy of the city plan. As the number of unfit houses which can be rehabilitated is small, projects on new sites have commonly been started in advance of clearance. This has been made possible largely by two factors, the municipally owned land within and on the outskirts of the city, and the general use of the bicycle, which puts the outskirts within easy reach. When this work began, Amsterdam, the largest of the Dutch cities, (population of 781,645 in 1936) had an area of only twenty square miles and is without hills—favorable to the general use of the bicycle. The location of housing projects for the working class on the edge of the city has reduced some of the difficulties of slum clearance and interim housing—some, but not all, for the population to be rehoused on the site was usually the same that was originally there—less the number necessary to reduce the congestion.

The families originally occupying the slum clearance areas were carefully tabulated and classified by the Amsterdam Housing Authority in the following groups:

A. Normal workers' families
B. Very poor families
C. Very large families
D. The aged
E. Single people
F. Asocial families

The Authority recognizes that:

Group A, the normal workers' families could be assured of good housing through private enterprise or through coöperative societies.

Group B, the very poor families could not pay rent based on a return of the investment of good housing, therefore for them the municipality had housing built with the aid of government loans and with annual government subsidies to reduce the rent. This housing was rented exclusively to:

(a) Families expelled from unfit houses in the path of a slum clearance project.

(b) Families in houses of inferior quality.

(c) Families in over-crowded houses and all those families which were considered unable to pay a normal rent. Seven projects, housing 2577 families, were built for this group up to the summer of 1938; of these 823 families were housed in four story apartments and 1754 in row houses.

Group C, for large families, particularly those of ten or more, provision was made in each group for units with as many as five bedrooms, according to actual needs. These have independent ground floor entrances and are normally in row houses.

Group D–E, for the aged and for single people special buildings were built in each project. For the aged each dwelling is on the ground floor, *Plate XXII E, p. 78,* is a compactly planned unit with a minimum of steps and has a tiny garden. For single people the unit commonly consists of a living room, a shallow cupboard kitchen with small gas stove, sink, shelves, etc., and a small bedroom.[53] In the United States the only groups from this list for whom we have provided are A, part of B, the single individuals in Group E, and a few in C.

Group F we discuss at length a little later.

"The experience acquired in Amsterdam has proven that one can feel safe in placing normal working class families in four storied houses such as are found everywhere in Amsterdam. Those families which differ mentally or socially from the normal families or who maintain an irregular life should preferably be placed in houses for single families [*i.e.*, row units] since they need more open space about them than normal families. The same is true of the aged and of large families; for them a single family house [*i.e.*, unit in a row] is better" . . . "At Amsterdam experience has proven that families should not be lodged in eight family apartments [*i.e.*, eight families on one entry]; that causes too many difficulties of every sort."[54] One such difficulty is the lack of responsibility for upkeep of public halls and stairs.

*Housing for the Asocial, the "Undesirables" or the "Uncoöperative" Tenants*

"The housing of families called asocial (or undesirable) expelled from the slums remains a thorny question to solve:

In what manner should these families be aided? It is impossible to admit them into groups for normal families since the asocial families by their conduct will spoil the order, the property and the necessary repose."[55] By definition they are those who do not take proper care of their dwelling, or refuse to pay

[52] Quotations and other data in this paragraph are from Bommer, op. cit.

[53] "L'Assainissement et la suppression des taudis a Amsterdam." Housing Dep't. of Amsterdam, presumably by Arie Kepler, the celebrated director of Amsterdam Housing, pp. 6–9.

[54] "L'Assainissement, etc.," op. cit., p. 10.

[55] "L'Assainissement etc.," op. cit., p. 9.

rent, or cannot get along with their neighbor without quarreling.[56]

Here is an issue which England dodged until 1938, and which all other countries have dodged, including the U. S. (except in the District of Columbia). The general procedure has been to make careful selection of desirable tenants for new housing, on the basis of financial reliability, character, etc., leaving the most needy and the least responsible of the old slum dwellers in their old slums. The social principles underlying the Dutch asocial housing are essentially none other than those developed long ago by Octavia Hill in the old London slums, but here applied in a comprehensive way and with all the advantages of a modern plant. This problem should at once be faced everywhere. The following details should help us.

"In Amsterdam they have built in open areas on the edge of the city two relatively small groups of one story apartments for the "undesirables"—a harsh term, but wait. These quarters are severely simple and of rugged construction and finish. They consist of living room, bedrooms and a w.c., all without heating equipment, a kitchen with a gas outlet and shelf for a gas stove; a tap for cold water and drain, a small backyard and maybe a shed for a pushcart and no more, for they are houses for the asocial—those who are the neighborhood trouble makers, drunkards, people of low intelligence, and, in some families, idiots. Separate bath houses and laundries are provided, each in charge of an attendant. The baths are free, but for the laundry there is a nominal charge. The apartments and houses open on generous courts; vegetable gardens are available for those who have the inclination to work them. There is a clubroom where housewives and girls are taught sewing and the boys various kinds of work. There is a day nursery for the children from $1\frac{1}{2}$ to 5 years old, whose mothers must go out to work. The older children go to the standard public schools.

"Each group is in charge of a full-time woman superintendent (a trained social worker) assisted by the two male attendants at the bath and laundry and the nurse in the day nursery. No families are compelled to live in the asocial group, but most of them find their lot there so much better than in their former quarters that they are loyally attached to them. The two colonies have capacity for 187 families, which is at the rate of about *nine families in each ten thousand* of the total number of families in the city. Since their completion in 1926 and 1932 as many as 143 families have been graduated to the better quarters of normal neighborhoods, as a reward for good behaviour—a most encouraging proportion. Under other circumstances many of these tenants would be frequent public charges in various houses of detention, asylums, at a greater cost to the public, and with little chance of the family rising to anything better. To my mind this is a successful social venture of great significance. It makes an important contribution both to housing standards and to housing methods."[57] *Plate XXII, F, p. 78.*

Of similar housing Dr. Edith Elmer Wood wrote: "The classification of tenants in Holland who have been displaced by slum clearance and the different disposition made of them offers a fruitful subject of study. As far back as 1928 nine cities made special provision for the undesirable or uncoöperative tenants. The methods used have improved with experience. At the Hague, where they are especially effective, the percentage of "total loss" families has become very small indeed." Commenting on an article by Dr. Schut of the Hague, Dr. Wood continues: "These dwellings are really institutional in character, involving definite control and substantial limitation of personal liberty. No family is forced, however, to go to them or to remain, so that the element of compulsion is lacking. The nearest analogy is to a hospital or sanatorium. There have to be rules, and the rules have to be kept, but the patients are not in jail. When they are cured, or sufficiently improved, or determined to be incurable, they are discharged."[58]

### *Housing for Special Minority Groups*

In another respect the Dutch, in Amsterdam at least, have done what no doubt would violate the sensibilities of many American housers. A number of small minority groups are in segregated housing groups. We have already referred to the aged, single folks, and asocial families. In addition to these, the Jews from the old Ghetto have their own attractive neighborhood. *Plate XXI F, p. 71.* The Roman Catholics, a relatively small minority, have a garden suburb centered about a simple but very beautiful little church, part of the project. *Plate XXII C, p. 78.* These groups in Amsterdam, like many of our racial groups in America, have racial traditions which are very dear to them and often add depth and breadth to the national culture. Should they be lightly obliterated by throwing them into the "melting pot," which tends to merge all into one and the same drab mass? The American tendency to standardization in all things—dress, action and thinking—is surely a questionable asset. The wisdom of even the voluntary segregation of some of these minorities, often somewhat estranged, will be questioned by some; but it is well to bear in mind that similar traditions and tastes make for neighborliness and that it is important to foster whatever will add to neighborliness and neighborhood coöperation—a first step toward good citizenship. The municipal and national loyalty of these groups is fostered through the common school system; so in time they will learn that they have more in common than at variance. May not the advantages more than offset any disadvantages?

[56] "The Housing Problem of Asocial or Undesirable Families," Housing Department of Amsterdam, 1937, p. 1.

[57] "Highlights of a Housing Tour of Northern Europe," G. H. Gray, The Octagon, Dec. 1937, p. 1 and 2, with slight changes.

[58] "Slums and Blighted Areas in the U. S.," U. S. Gov't. Printing Office, Washington, D. C., 1935, p. 117.

This point will be considered again in the chapter on Our Changing Culture, in the section on Population.

*City Planning and Site Planning*

The larger cities of Holland are in the coastal area, where much of the land has been reclaimed from the sea. The older parts of the cities are compact groups of many islands, sea or canal bound. Landward they are largely surrounded by the reclaimed and dyke-protected "polder" land. All buildings but those of light construction stand on piles. In the use of land thus dearly acquired there must be thrift. There are comparatively few spacious avenues and squares; most buildings are of four stories, seldom more, all closely spaced. Even in the newer outlying sections the land coverage and density of the housing is greater than we have noted in comparable locations in English cities. *Plate XXIII A, B and C, p. 79.*

In the older part of Amsterdam the slum dwellings were of two types; (a) speculative tenements of mean standards erected between 1870 and 1901, (b) the larger houses abandoned by the prosperous and remodeled into tenements with many small rooms. Following the City Plan Act of 1901, which authorized the expropriation of slum property, an intensive survey was made of these areas, as a result of which most of those speculative apartments came down; but buildings of historic interest and architectural merit were preserved, and such residences as could be rehabilitated. On the sites thus partially cleared, new housing was erected, usually to a height of four stories, but sometimes higher, where facing canals or other open spaces. *Plate XXI, A and B, p. 71.*

Under the City Plan Act of 1901, all towns with a population of 10,000 or more (and under certain circumstances smaller ones) were required to prepare a town plan and to revise it every ten years. A revision of 1921 extended this to all communities which experience an increase of population in excess of 20 per cent in five years, and makes planning optional for other communities.[59] The Amsterdam plan, prepared pursuant to this Act, limited the height of new buildings to the width of the street, or in exceptional cases to one and one-half and even two times the width. In the new areas, designed wholly for residences, the width of streets was set at 30 feet for two-way roads (15 feet for the roadway, and on both sides, 3 feet for planting, 4 feet for walks); for one way streets, roadways were set at 10 feet, walks at 3 feet.[60]

The first period of the rehousing of Amsterdam concentrated on new housing groups on slum clearance sites. But there was a surplus population which had to be housed elsewhere, and *all* those dehoused also had to be *temporarily* housed; so the denser housing and the less dense proceeded in close sequence. That all but the outlying housing is fairly dense is shown in the air view of "Amstelcanal" in which it will be noted that the courts are entirely closed. *Plate XXI B, p. 71.* But in the outlying areas, even the apartment blocks were less densely planned, as witness Afrikaansche Buurt (not for negroes). *Plate Hol. XXIII C, p. 79.* How much more openly and flexibly the cottage groups were planned appears in the air view of Amstelveen, *Plate XXII, A, p. 78,* in Buikslooterham and in Het Blauwe Zand. *Plate XXIII, A, B, p. 79.*

*The Later Plans: A Preview of the Pattern of our Future Cities*[61]

In 1939 the directory plan, or master plan, for the general extension of Amsterdam was approved by Royal Decree, and by decree of the Provincial Government early in 1940. The plan "is based on the principle, that the nearly one million future inhabitants of Amsterdam shall not only get the equipment best suited for their commercial and industrial activities, but also the best possible accommodation as to housing and recreation, so that Amsterdam may develop into a place not only good to look at but good to live in." The plan provides for dwelling-quarters for all classes of the population, and is envisioned in two quite different types: (1) an intermediate zone between the older central portion of the city and the more open area, in which zone the dwelling-quarters are projected as normal extensions of those existing, where apartment houses in blocks of three and four stories are prevalent and the few one family houses are for those of the upper range of the middle income group—land prices being prohibitive for one-family houses on a large scale; (2) on the rural side of this zone are projected "separately arranged garden cities of 40,000 to 50,000 each, with a large number of one- and two-family houses and with much open space in connection with the larger recreation areas, which will separate the garden-city units. ". . .Thus the units will have most of the advantages of an isolated garden-city, without the disadvantages of its great distance to the town (expensive communication roads, expensive and tiresome means of communication and so on)." Yet because of self supporting industries they are garden cities. *Plate XXIV, p. 80.*

The Municipal Council promptly accepted the detail plan of the first of those garden suburb units. This is Slotermeer to the west of the city, in the neighborhood of the existing and projected docks and industrial areas. Logically it will be occupied mostly by workmen who "will live in conditions totally unknown as yet even in the best of the now existing modern Amsterdam quarters." Before the adoption of this detail plan, several schemes were developed to a point which

[59] "Recent Advances in Town Planning," by Thomas Adams, Macmillan, New York, 1932, p. 88.

[60] "Europe Rehoused" by Elizabeth Denby, W. H. Norton & Co., Inc., N. Y., 1938, pp. 97–98.

[61] The quotations and other data under this heading are from "Plans for the Garden City in Amsterdam," by L. S. P. Scheffer, chief of the Town Planning Section of the Municipal Department of Public Works, Amsterdam; in Housing and Town Planning No. III–IV, Stuttgart, May, 1940, pp. 3–7.

would permit of comparative estimates of cost, and of determining the relative proportion of apartment buildings to one- and two-family houses, and the extent and disposition of open spaces. The apartment houses will be in rows near the highway and bordering on large parks, or on the lake, with private gardens between the rows. The one- and two-family houses, occupying two-thirds of the plan, will be in rows "bedded in private gardens," and arranged in groups "intersected by green stretches." Near the geographic center will be a market-place with a church, a restaurant along the canal, a post-office and shops; there will also be local shops and a group of studios and workshops. Along the shore of the adjoining lake will be a bathing beach and several harbors for aquatic sports. The sites for the different kinds of schools (elementary and secondary, a school of arts and crafts, a school of housekeeping, etc.) and also sites for the churches have been so chosen and developed that they add variety and interest to the general picture. A group of twelve story apartments along the lake front contributes to the same end.

All this seems to put Amsterdam in the position of being more advanced in the realization of a comprehensive plan than any other large city in the world, and so warrants a view of the steps taken. First came the law of 1851 permitting towns to expropriate land for housing purposes; next the law of 1901, requiring each town to have a town plan, to establish regulations for building and for the maintenance and proper use of dwellings, to make grants and loans for the erection of dwellings for the working class, and reaffirming the right of condemnation. Under these laws we saw first the redevelopment of the older central area, where many buildings of sound construction could be rehabilitated. To care for the population dehoused in clearing up the central area, we saw the development of new residential neighborhoods on outlying sites (which might have been acquired under the act of 1851); and we saw the continuance of this process until the slums were almost completely eradicated; finally we see the preparation of detailed plans to house all future growth of population in highly developed garden cities.

With this as a measuring rod, we in the United States are very backward. Few of our cities have gotten as far as the law of 1851 permitting cities to expropriate any land needed for housing (Washington being a possible exception); few if any large cities have an adequately comprehensive "directory," or master plan; many have some good housing projects, but they may or may not be found to be well adjusted to the city plan when made; only a few have diversified garden suburbs (such as Mariemont, near Cincinnati). We have no garden city.

*Plans and Equipment of Buildings*

As for the dwelling units, separate bedrooms are required for parents and children, for whom, when they are over ten years of age, separate rooms must be provided for those of different sex. Under certain circumstances parents might use the living room as their bedroom.[62] *Flats located above the ground floor usually have a kitchen balcony*, opening on the rear yard or court. The floor area of the rooms is appreciably less than in Great Britain and the United States, as will be seen in the unit plans. *Plate XXIII, p. 79.* The air cubage per foot of area is proportionately somewhat higher owing to higher ceilings—8 ft. 10 inches in Amsterdam and 9 ft. 5 in. in certain cottages in Rotterdam—against 8 ft. 6 in. in Great Britain and 7 ft. 10 in. in the United States. Storage space is either in a shed in the rear yard or in the attic—there being no cellars available because of marshy ground.

The only plumbing fixtures are a kitchen sink with cold water faucet and drainboard, a toilet in an inside closet ventilated by means of a small duct and lighted through translucent glass in the door and maybe in a partition. The tenant brings his own tub, his own heating stove for the living room, his own range, his own lighting fixtures. The tub is that old-fashioned spacious basin, a yard or more in diameter, of copper or tinned sheet metal, brightly polished, and often adorns the kitchen wall. This tub, however, seems to be doomed by a recent requirement that new plans shall include a shower stall. *Plate XXII E, p. 78.* Gas and electricity are paid for by "a coin in the slot." As an experiment, some years back, central heat and hot water were installed in several adjoining groups of coöperative apartments, but even with these more prosperous families it was not too popular because of a small extra fee. The laundrying is usually done at home and dried in the yard of cottages and on the balconies of apartments.

There are few provisions for social activities. Except in the asocial groups, there are no day nurseries, no laundry or bath establishments in connection with the housing, though bath establishments, operated by the municipality, may be located at no great distance. Some of the blocks of apartments are too closely spaced to allow for common gardens and large playgrounds. Large and beautifully appointed playgrounds exist, however, but at long intervals. *Plate XXII, B, p. 78.* The lack of playgrounds immediately at hand can be explained by the fact that everyone rides a bicycle—about every city dweller in Holland travels from the cradle to the grave on a bicycle. It solves all transportation problems for work and for pleasure; on the highway there are special paths for cyclists. Young couples travel on tandems; when the first child comes the bicycle is equipped with bassinet. Water sports or skating are always near for the cyclists.

The restrained standards of convenience do not indicate a low standard of living. There seems to be a tradition of work, thrift and cleanliness. The people are as immaculate as their shining and colorful homes, as carefully groomed as their beautiful gardens. That most of the population live healthfully is indicated

[62] Kepler, "Rents for the Working Class," op. cit., p. 170.

by the fact that, under the new housing conditions, the birth and maternity mortality rates are low, the span of life is steadily increasing, as is the total population —despite a decline in the birth rate.

The proportion of total income which goes into shelter rent (i.e. not including the utilities) under normal conditions appears to vary for the most part from about 13 per cent to about 21 per cent, according to size of family and of income. The wages of the typical working class and of unskilled labor in the building trades is nearly three-fourths that of the skilled workers in the same trades.[63] In buildings of the coöperative societies the rent is usually about 20 per cent of income, the members being "general workers with decent average wages, such as those in civil service, building trades, garment industry, transport and so on."[64] The Government has of late prescribed that the houses [assisted with Government Finance?] "shall not be let to persons with incomes exceeding 7 times the rent."[65]

*Architectural Characteristics*

Taking Holland as a whole, the traditional architecture has prevailed and with free handling has resulted in much intimacy and charm. The tradition of brick walls and tile roofs is generally maintained by an abundance of clay; but cement from Germany floated down the Rhine into southern Holland, in exchange for dairy products, accounts for a greater use of concrete and stucco in the southern cities. They have access to little lumber, so it is not evident in the exterior architecture. Traditional architecture, however, has not held complete sway. Before World War I, under the influence of Frank Lloyd Wright, some architects broke with tradition, producing an exotic and somewhat bizarre romanticism, rather than a straightforward expression either of function or of structure. Since that war, not a little of the housing has been designed in those simple terms which the economical character of the work suggest and which modern materials and methods of construction make possible. This is particularly true of the work in Rotterdam where cement is more available. The typical four-story apartment buildings are built with brick bearing walls, party walls, and cross partitions, with wood floor construction. They have a distinctive Dutch cachet—often, for example, developing as an architectural feature the pole projecting from the attic, to which is applied the tackle for hoisting furniture and heavy supplies.

The housing in the more open areas is for the most part made up of low rows of two story houses, pleasantly grouped, following in essentials those principles of garden community planning so well worked out by the British. The cottages have the feel of that traditional Dutch brick and tile domestic architecture, of which Miss Denby interestingly observes "... the fresh and mellow terraces of dark mulberry colored brick houses and cottages with bright gardens are the originals of the Georgian and Regency dwellings which first became fashionable in England at the time of our Dutch king William III, and are now regarded as among our greatest architectural treasures."[66]

The best commentary I can offer on the significance of the housing technique of the Dutch is from the pen of the late Henry Wright, written after an extensive study of German housing: "To understand the rapid progress in Germany and especially in the advanced type of design ... we must understand the close relationship between Germany and Holland. ...Holland was the first country to start housing on a large scale immediately following the war, and it advanced rapidly from traditional or romantic architectural expansion to the simpler and more direct forms growing out of functional designs, and new forms of construction. In fact, in 1924 the city of Amsterdam included in a single project 2500 dwellings, utilizing eight different forms of construction and materials which ranged from brick to pre-cast concrete. The result was that before the German program, the Dutch architects had begun to experiment in modern design. ...As work in their own country fell off many of the Dutch architects were prominently identified with the German program."[67] In view of the fact that the English post-war program was actually continuous with the war housing program, exception may be taken to Mr. Wright's statement that the Dutch were the first to get under way after the war. That, however, does not invalidate the essence of his statement.

*Summary*

To sum up, in forty years of housing, Holland passed through the normal period prior to World War I, the trying war period with its influx of foreigners, war wealth and accompanying high prices of buildings and of living; and through the period following World War I, with all its readjustments. By means of a broad policy of centralized governmental financed assistance and guidance, of local governmental administration and citizen initiative, they had pretty well rid their cities of slums, and they had in their stead (before the demolition of World War II) attractive residential areas in the center of the cities, and garden suburbs on the outskirts, all of which within a few years (when the loans would have been amortized) would have further reduced rents and have added to the economy and joy of living for a whole nation. Finally, for the future population of Amsterdam, there was the authorization for the larger and more complete garden communities.

## Housing in Denmark

*The General Picture*

Housing in Denmark is of interest to us principally because the Danes have proceeded on somewhat

[63] "Housing," op. cit., Vol. I, p. 277.

[64] Bommer, op. cit., p. 4.

[65] Bommer, op. cit., p. 7.

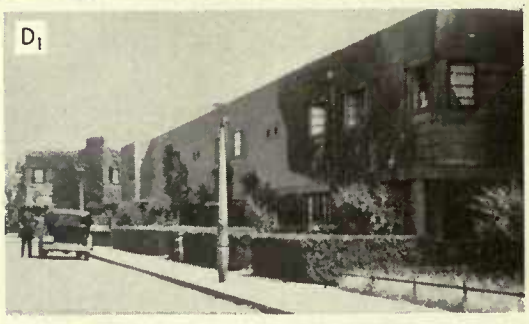
[66] "Europe Re-housed," Elizabeth Denby, with Foreword by Walter Gropius, N. Y., W. W. Norton & Co., Inc., p. 96.

[67] "Re-housing Urban America," op. cit., p. 86-87.

# PLATE XXII. HOLLAND 2. IN THE MORE OPEN AREAS OF AMSTERDAM AND ROTTERDAM



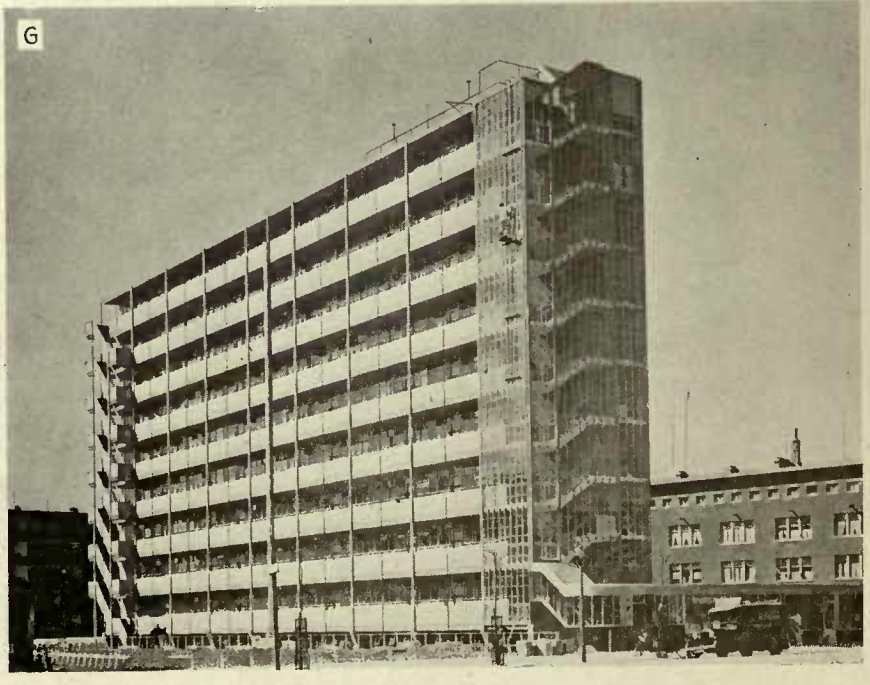


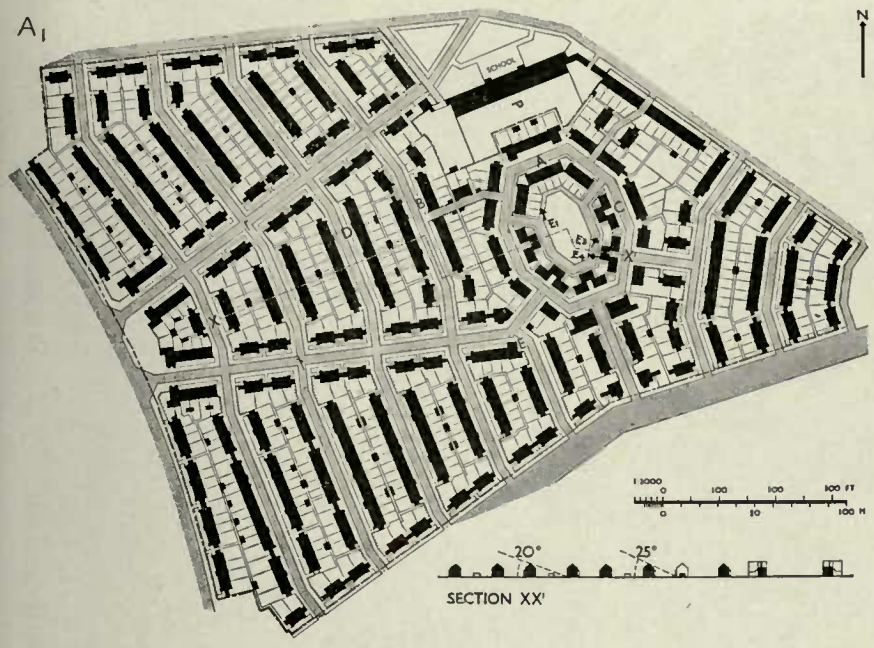



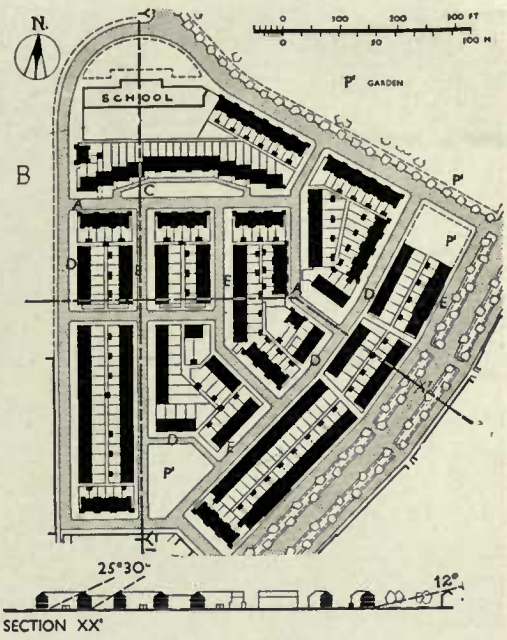


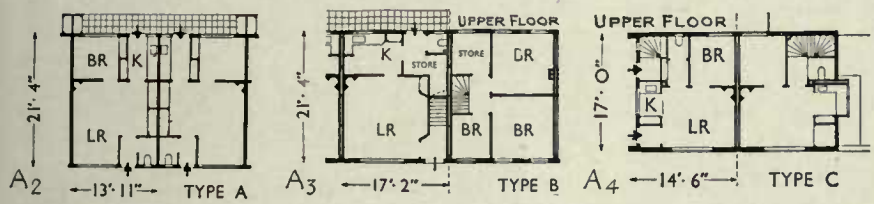


A. Amstelveen (cooperative?), note two approaches to two small docks. B. Houses of brilliant simplicity. C. Catholic center. D. Watergrafsmeer. $D_1$. General thoroughfare. $D_2$. 15 ft. roadway. $D_3$. 10 ft. roadway. Arch't. D. G. Greiner. E. Burkslaterham section for aged couples, in 1 & 2-story cottages. *Plan on next plate.* Arch't., J. M. Moulder. F. Amsteldorf, for the asocial. G. 1934. Rotterdam, Bergpolder, with access galleries. *Plan on next plate.* Arch'ts. Van Tigen and Van der Flugt. H. Flats, Arch't. J. J. P. Oud.

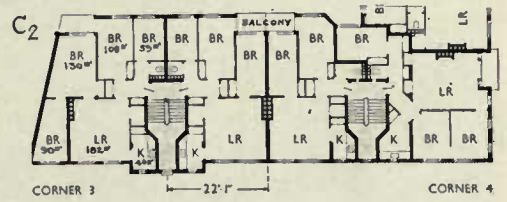




A, B, C, in Amsterdam. $A_1$. 1928–29. Buiksloterham. 1 & 2 stories; coverage 25%; density 179.

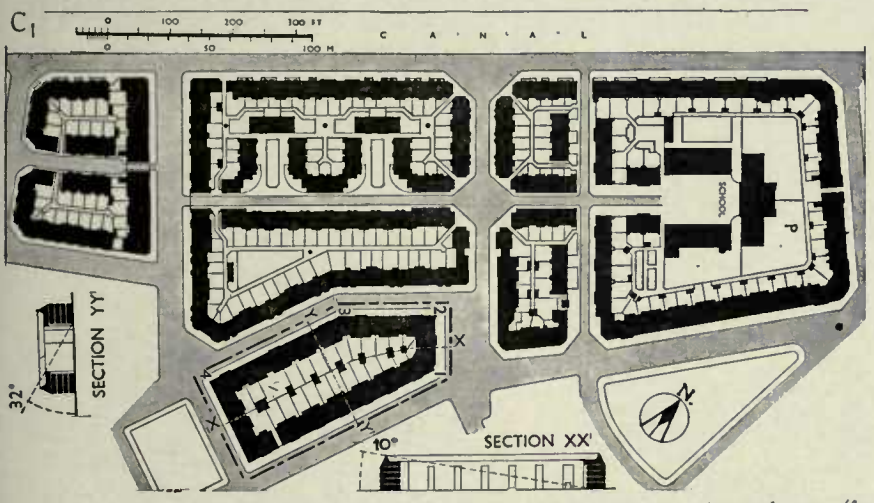
$A_2$, $A_3$, $A_4$. 1 & 2-story cottages for aged couples. *See Plate XX E.*

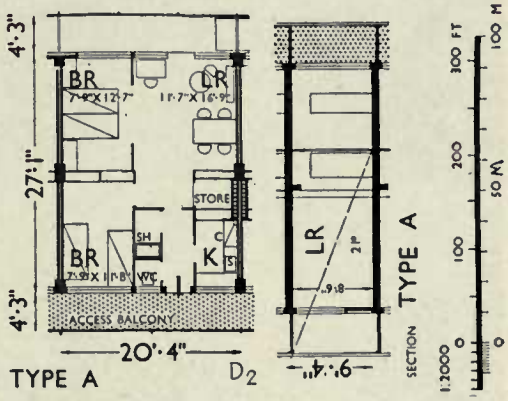



B. 1931–32. Het Blauwe Zand, detail of west end; 1½ & 2-stories, coverage 26%, (for total area, 21%), density 157, (for the total area, 115).

$C_1$, $C_2$. 1930. Afrikanschebuurt. 3, 4½, 5 stories; coverage 30%, density 359.

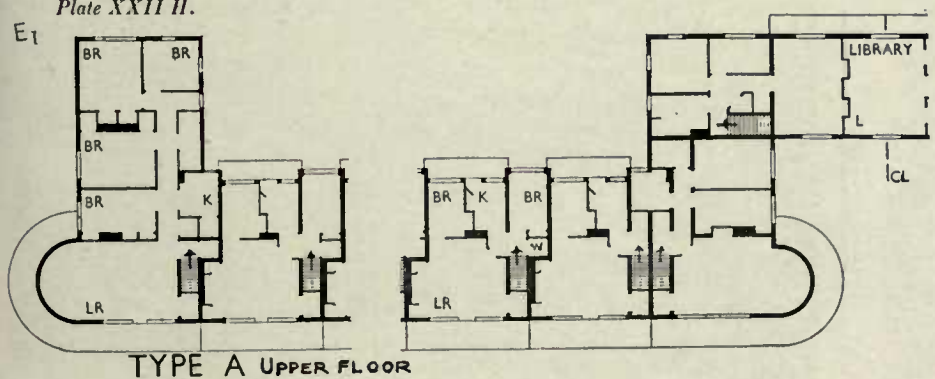
Note storage sheds in rear of yards (lower left)

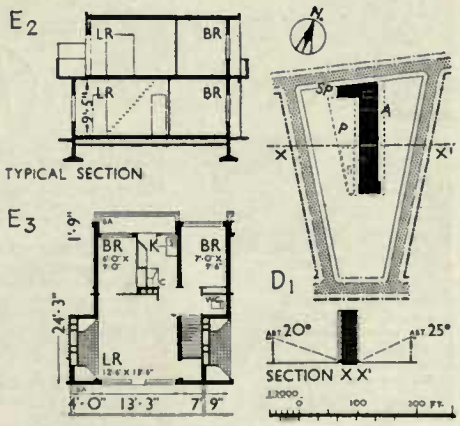



$D_1$, $D_2$. Rotterdam, Bergpolder stores and floors of flats; exterior stairs, 1 elevator (for upper floors?), access galleries. *See Plate XXII G.*

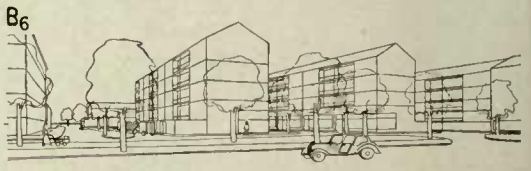
$E_1$, $E_2$, $E_3$. 1926–27. Rotterdam. Bearing wall 8½″ thick, stuccoed exterior. *See Plate XXII H.*

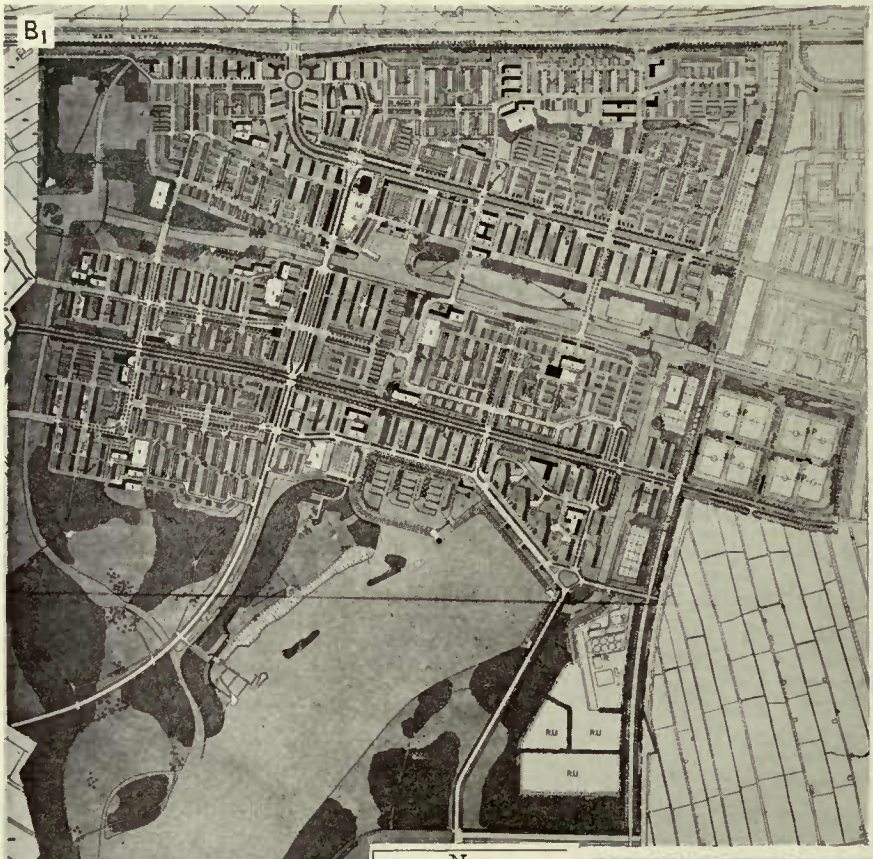


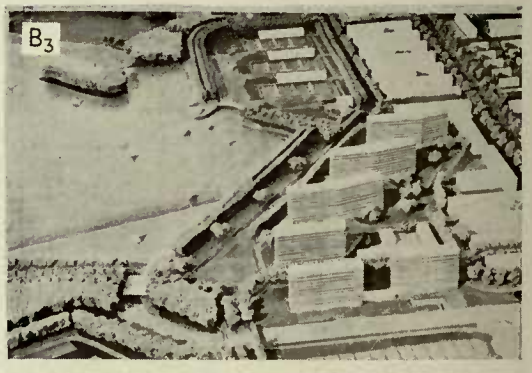
Slotomeer Garden Suburb is the first of several contemplated to provide for the greater part of the future increase in population. In the existing city, population 800,000, all slum areas have been cleared, the population rehoused in the manner shown in the preceding plates. Each suburb is to house from 400,000 to 500,000 people. A. Plan of Amsterdam (area incomplete). Slotomeer outlined by white dots. New docks and a general industrial area to the North. $B_1$. Slotomeer. Plan, 1939. $B_2$, $B_3$, $B_4$. Views of model. $B_2$. Embracing the entire area. $B_5$. Row house about school. $B_6$. Apartments.

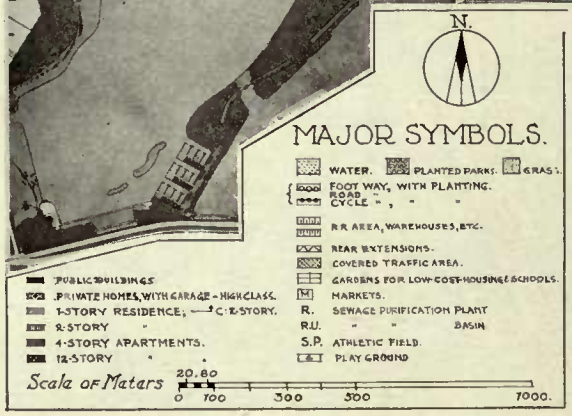










A1. The old city.

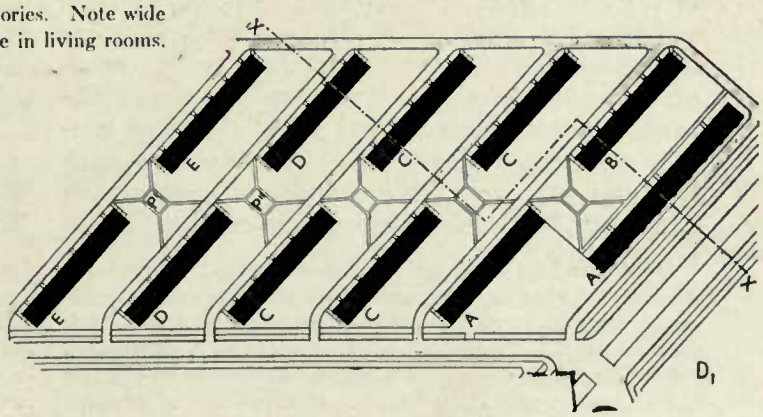

A2. Near the center.

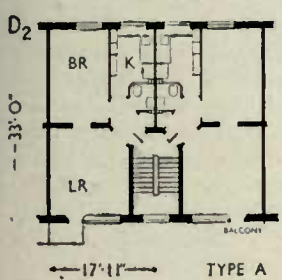

B. For the elderly, married and single.

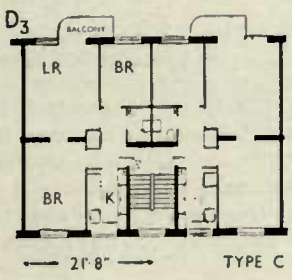



C. Housing in the intermediate area, 1937. 118, 3½, 4½ stories. Note wide glass exposure in living rooms.

D. 1933–34. Ryparken. Coverage 18%, density



different lines from those of other nations which we are considering. In this departure, dictated in part at least by necessity rather than choice, we plainly see the reason for the limitations found in the Danish housing program. To augment the scant capital available to most home builders, a mortgage system was developed which may hold interesting suggestions for financiers as well as housers in the U. S.

Denmark's area of 16,575 square miles is larger by a third than that of Holland, though the population (3,777,000) is less than half as large. Copenhagen is roughly about the same size as Amsterdam, but there are only a few other Danish cities over 50,000, and the importance of Denmark's colonies is negligible compared to those of Holland. The per capita federal income was about 137.5 kronen, equal in exchange to $27.50, but in purchasing power much more. The government was essentially democratic, public education of a high standard, and for over half a century the Danes have been leaders in craft and adult education. The rural population prior to the reorganization of the British Empire in 1931, was largely busied in producing butter, cheese, eggs, poultry and other foods for England; but after 1931 the new British Empire gave preference to trade with her dominions, thus cutting off Denmark's major market. More recently Germany also had been developing her own program for self-sufficiency, which further reduced Denmark's markets. As her industrial exports were relatively small, Denmark had to set about developing an entirely new economic structure. This was a staggering undertaking.[68] She adopted a housing policy involving a minimum of government expenditures. It may be wondered that she could feel justified in going into housing at all, but Denmark, like other European countries, recognized housing as a means of maintaining a healthful, contented and loyal people, a matter of prime importance to their very existence. In the tragic situation following 1939–40 the wisdom of this policy becomes more apparent.

World War I brought an influx of refugees to Denmark, beyond the capacity to house them. As a result of this housing shortage, which was accompanied by exorbitant rents (especially in Copenhagen) a rent and tenancy control act was passed in 1916. With an influx of some 20,000 people from the rural to the urban areas, another act was passed in 1917, and some half dozen other acts up to 1937, providing for financial aid from the government through various agencies, ranging from state and municipality to private building organizations. This brought about the erection of a considerable number of houses during the following years, carried out mainly by coöperative societies.[69] But before we consider the results which the coöperatives have achieved we shall consider the financing back of them.

*Home Owning without Money*

Housing activities in Denmark were brought about largely through a highly developed mortgage system, including third mortgages. With these aids, one wishing to build his own home ordinarily needed only to have cash or other assets equal to from 5 per cent to 15 per cent of the cost of building, or only to have his lot, as the value of the lot was about 10 per cent of the total cost. In practice it was often possible to secure the land itself with deferred payments and also to arrange for deferred payments on a part of the money due the building contractor—enough to make up the owner's usual entire equity of from five to fifteen per cent.[70] The building associations could obtain mortgages from the government up to as high as 95 per cent in some cases. If, however, anyone wished to enter into a coöperative building project, he was required to put up the initial fees, which ranged from 5 to 15 per cent—but more as to the fees later.

The third mortgage came in to take up the gap between the owner's usual 5 to 15 per cent equity and that which he could raise from first and second commercial mortgages. Building loans, other than those from the government, were limited by the law of 1869; for trust money up to 50 per cent of the estimated value; for first mortgages of credit associations (life insurance companies, etc.), usually up to 60 per cent of business value for urban buildings; for second mortgages of credit associations up to 75 per cent. In practice all loans are about three-quarters of those thus legally allowed.[71]

Prior to 1917 even second mortgage money was not easy to get. To correct that difficulty the government in 1917 established a Housing Loan Fund. After that the scope and terms of the act were expanded through several other acts, until in 1933 it was given its final form. Third mortgages could be had from this fund by municipalities, coöperative building societies, public utility housing societies, individual home owners, builders of apartments for investment, and philanthropic societies; first mortgages were available for modernization of existing apartment houses—automatically taking precedence over all existing mortgages. The interest rate of the third mortgages was fixed at $4\frac{1}{2}$ per cent plus an amortization fee of 1 per cent per annum; the first mortgages were at $3\frac{1}{2}$ per cent. The proportion of the cost of construction which could be

[68] The foregoing may be an overstatement. It was based on information gathered in my visit to Denmark in 1937. Recently, however, I have been informed by an official of the Danish Government that the loss of trade to England while appreciable, did not turn out to be as great as was feared it would be, that the fear was greater than the reality. Nevertheless, even as a fear, it may well have affected the national financial policy. The same official pointed out that Denmark had a very large merchant marine which produced a large income from foreign trade.

[69] Kobenhaven comments BOLIG transtaltinger, Direcktoratet for Stadens faste Ependonne, Aug. 1936, Translation, p. 18.

[70] "Financing House-building of the Lower Classes," Report of International Housing & Town Planning Congress, Paris, 1937. Section on Denmark, by F. C. Balsen, p. 82.

[71] Prepared from data by Balsen, "Financing, etc.," op. cit., p. 82.

borrowed is shown in Column 2 and the terms in Column 3 of Table VIIa.

After the depression of 1931 the state liberalized its loans and set up a "crisis fund" for loans, ranking after all other mortgages. Such loans could be obtained either from the municipal authorities or from the Ministry of the Interior, which was in charge of all housing activities for the government. These loans were available for rehabilitation, at 3½ per cent plus 1 per cent for amortization. In 1934 the total number of dwellings built with financial assistance from the state was 5,622.[72]

In such a pyramid of mortgages and financing as we have outlined, the risk of credit is an important factor, which would, if safeguarded or insured, add another item to the already long list of financing costs. Experience had shown also that in Denmark real estate itself had withstood the shock of crises better than its mortgage bonds. With these facts in mind, in the field of first and second mortgages, "*The Stabilia Company*" was organized as an investment company, building or buying apartment houses without any

Table VIIa. Usual Terms of Mortgages on New Housing in Denmark[73]

| | Duration | Interest | Total annuity including amortization and service |
|---|---|---|---|
| First Mortgages | 60 years | 4 to 4½% | 4.62 to 5.04% |
| Second Mortgages | 45 years | 4½ to 5% | 5.4 to 6.0% |
| Third Mortgages | 36 years | 4½% | 5.5% |

borrowed money or other financial encumbrances, thus being in a position to reduce rents by the amount of the interest and other rates commonly charged for mortgages and other borrowed money used during construction. Besides this, in the field of the third mortgage and contractor's credits, etc., *Dansk Financia A/G* was organized as a joint stock and investment company, to take shares in real estate concerns and substitute for the third mortgage "written engagements of part debt, which apply either to the single property or to the investment company itself," and which are together guaranteed in the houses mortgaged.[73] The object was to make it both easier and more economical to finance building for those with little or no capital. Twelve and one-half million kronen had been thus invested by Dansk Financia in 1937. Solvency of tenants was, generally speaking, entirely satisfactory and rents were paid punctually, as *rent claims had a privileged rank under the bankruptcy law.*[74]

The major original sources of money for financing housing organizations were credit societies (life insurance companies, etc.) for first mortgage loans, while mortgage associations supplied the second mortgages. These two groups in turn issued bonds which were marketed on the stock exchange and were an investment of the Kingdom of Denmark Mortgage Bank. Those wishing building funds commonly obtained them through Coöperative Building Societies or Limited Dividend Public Utility Companies, which secured these funds from the original sources just mentioned.

Table VIII. Data on Loans Available from the Danish Building Fund to Various Building Organizations*

| Loans from State Building Fund To | Percentage of Construction Costs | |
|---|---|---|
| | State Mortgage | Maximum of all Mortgages (including state) |
| Municipalities | 40% | 95% |
| Co-operative Building Societies | 30 | 85 |
| | 40 | 95† |
| Individual house owners | 30 | 80 |
| | 40† | 90‡ |
| Private enterprise flats | 25 | 70 |
| | 25 | 80§ |

* Prepared from data in Bassin, op. cit., p. 7.

† Amounts available only if municipality guarantees that part of state loan in excess of 85%.

‡ Amounts available only if municipality guarantees that part of state loan in excess of 80%.

§ Amounts available only provided the state guarantees that part of the loan in excess of 70%.

### *The Coöperatives, Limited Dividend Companies and Foundations*

The *Coöperatives* came into being in 1911 as a way to forestall speculative building prices and poor construction, and were licensed by the Ministry of the Interior. To become a member one paid for a share of stock and, when assigned an apartment, paid the equivalent of a year's rent, both of which payments were credited as investments, bore interest at 4 per cent, and could be cashed in if the member left the society. The rent provided for amortization, which gradually reduced the rent to a low figure. The co-operatives could get a loan as high as 95 per cent of the cost of the project from the credit association or from mortgage societies or the Government Housing Fund the remainder coming from the initial investment of individual members. These members were usually the better paid workers. Coöperatives built some single and semi-detached houses, but more apartments, and even entire sub-divisions. In 1931 they were in charge of about 30 per cent of all building operations in Denmark. They had a national organization, The United Danish Building Societies, which audited for the affiliated societies, standardized procedures and promoted coöperation.

[72] "Housing Agencies in Denmark and Spain," a PWA project supervised by Arthur Bassin, N. Y. City Housing Authority, 10 East 40th St., 1938, p. 7.

[73] Balsen, "Financing, etc.," op. cit., p. 82.

[74] Balsen, "Rents, etc.," op. cit., p. 212.

*Limited Dividend* or Public Utility Companies, also licensed by the Ministry, recruited their members largely from the Building Trades Unions and these members commonly coöperated by erecting the buildings. This was especially true of the Workers Cooperative Housing Society (limited dividend) which was established in 1912, and by 1937 had built 4,200 apartments. This is the only one of the large coöperatives of Copenhagen which permitted member ownership of dwellings, and this only of small dwellings; and they might not sell their shares individually. To the one vacating an apartment were charged the necessary redecorations and repairs.[75] The Copenhagen General Housing Company, organized in 1920, had, by 1935, twenty-two subsidiary branches or affiliates in and about the city, each affiliate representing a project and becoming an independent economic unit when the buildings were completed. However, unlike the procedure in Holland and Sweden, the tenants had no voice in the management, which operated through a board of three from the parent company. C. G. H. C. in 1935 had produced 7,203 dwellings;[76] by 1937 the number has risen to 7,400.[77]

*Housing Foundations* are usually philanthropic or semi-philanthropic. Considerable housing was erected by the coöperative Employer's and Employee's Associations. Some of these received legacies in which there was a clause which required that the dwellings be let in the ordinary manner until the mortgages should be redeemed, thus creating a surplus to be applied (after the redemption of the mortgage) either for the reduction of rents or for free rents. After the redemption of the first and second mortgages (usually after 50 years), new mortgages were to be raised and applied to financing of more dwellings—a cumulative revolving fund.[78] (Compare with Bourneville and Port Sunlight, p. 58.)

*What the Municipalities Have Done*

The municipalities themselves, more especially Copenhagen, took a direct hand in their housing problem, first in prohibiting exorbitant rents, next in supplying temporary housing quarters during periods of over-crowding, finally in supplying permanent quarters. In the period from 1916 to 1920 the population of Copenhagen increased by 50,500 (10 per cent), at a time when high prices deterred the erection of new buildings. Many of the poorer families doubled up—two families in a two-room apartment of the poorest kind. Others lived in summer shacks in suburban allotment gardens. For the very poorest, the city had to provide quarters, some in old and inadequate apartments and many in the public schools—at one time as many as 2,217 families. It was necessary to decree that, except for special reasons, no more people should move into Copenhagen.[79] Of the total of 280,000 dwellings for Copenhagen's population of 660,000, as of 1937, about 56,000 or *20 per cent were under rent control by the municipality.* Of these about 15,000 (5.3 per cent of the total) were owned by the municipality; another 15,000 (5.3 per cent) by special societies; the remainder of 26,000 (9.3 per cent), although owned by private persons, were under municipal control. For the purchase of lots the municipality frequently lent money secured by a second mortgage and reserved a purchase right, "so that a plot with house after seventy or one hundred years might be reconditioned at a moderate cost."[80]

Copenhagen, like so many other European cities, owns much land about the outskirts and had a city plan commission with the right of expropriation (paying the normal market value) with the result that new relatively low-cost housing, both municipal and private, is found in several well-planned suburbs. One of these centers about the great modern memorial church to Bishop Grundtvig, founder of the Danish system of folk-education, a national hero. As seen in the illustration *Plate XXVI, A, p. 86*, the houses in this suburb are mostly of the row type. Valby, another suburb, is built up with three story apartments in the center and with cottages on the outskirts (*Plate XXVI, C, D, E, F, p. 86.* These are suburbs readily accessible because of the bicycle, which in Denmark is about as prevalent as in Holland.

*Special Public Aids to Housing*

Up to 1916 building construction was carried on almost entirely by private enterprise, but at that time *public bodies found it necessary to take up building activities in order to reduce unemployment.* Rents on these buildings were as a rule calculated without any profit, except for an extra charge of about 2 per cent of the rents for a reserve fund. Under the Act of 1933 "Public bodies were generally obliged to come to the aid of all those not able to assure their families subsistence," and also *to procure the necessary living space for those without abode.* But in the procurement of dwellings the law ignored any privileged position for large or particularly needy families, and there was *no stipulation as to the class of tenants who are to benefit from the advantages offered.*[81] The housing shortage has made it difficult for the authorities to "prohibit the use of even very miserable flats for habitation."[82]

*Resumé of Accomplishments*

In sum, Denmark, in the face of tremendous obstacles, managed to carry on a fairly large program

[75] Housing in Scandinavia, John Graham, Jr., University of North Carolina Press, 1940; pp. 104, 99, 102.

[76] Bassin, op. cit., pp. 21, 22.

[77] Graham, op. cit., p. 111.

[78] Balsen, "Rents, etc.," p. 212.

[79] The foregoing data in this paragraph are from "Bolig, etc.," op. cit., p. 23.

[80] Balsen, "Rents, etc.," op. cit., p. 212–213; Quotation and preceding data back to preceding footnote.

[81] Balsen, "Rents, etc.," op. cit., p. 213.

[82] "Bolig, etc.," op. cit., p. 24.

for the production of houses for people of all classes, particularly those of moderate and relatively low incomes, available at rents twenty to thirty per cent below those supplied by private enterprise. Profiteering in rents had been abated. In accomplishing all this there was financial backing by state and municipality, partly through municipal land made available at low cost; but there were no direct subsidies, except for a period of a few years and except for the exemption of various taxes (other than those on the house and lot) and the providing of abodes for those without them. No special provision was made for large families or asocial families; slum clearance had not been directly attacked, and dwellings officially recognized as unfit remained in use.

*Rents and Budgets*

The proportion of shelter rent to income varied considerably and with the size of incomes—18.4 per cent of incomes of 3000 kronen, 15.0 per cent of incomes of 4000 kronen, 12.8 per cent of incomes of 5000 kronen. These percentages are exclusive not only of heat and light but of various taxes and other levies. This appears in Table IX based on the budget of a working family in "good conditions."[83]

TABLE IX. BUDGET OF WORKING FAMILY

| | |
|---|---|
| Food | 32.8% |
| Clothing | 13.4 |
| Shelter | 13.4 |
| Heat and Light | 4.8 |
| Taxes and Contributions | 13.8 |
| Other expenses | 21.8 |

TABLE X. VARIATION OF RENT ITEM WITH SIZE OF COMMUNITY

| | Rent | Heat and Light | Total |
|---|---|---|---|
| Capital | 13.9% | 3.5% | 17.4% |
| Towns | 14.2 | 5.5 | 19.7 |
| Rural | 13.2 | 6.6 | 19.8 |

*Site Planning and Architecture*

As we have previously stated the municipality owns extensive areas in the outskirts, and although under an act of 1934 and prior ones it can for housing purposes condemn land in the interior of the city, yet it is hampered in slum clearance because it must pay for this land the price set by the sales price in a period of housing shortage. The proportions to which land might legally be covered by buildings were, in the center of the city 75 per cent, in intermediate areas 50 per cent, in suburban areas 34 per cent. There were no fixed standards of density. Until about 1936 three story apartments prevailed, since then five stories are common in the intermediate areas (*Plate XXV, p. 81*), and even higher ones in the center. Town planning and loan regulations have not been conducive to the cottage type of dwelling, whether single or in rows; specifically, wide streets have been required, and loans are encouraged only for dwellings of from one to three rooms, which are best built in flats.[84] Thus even in the open suburbs we see three story apartments. *Plate XXVI, E, F, p. 86.* Open parks and play areas, either of land or water, are not common. Thus it is that all but a few of the more expensive apartments are well out from the center—still within easy cycling. There are, however, in the suburbs extensive areas for allotment gardens for those within the city, made possible by city-owned land. In the center of the city is an extensive municipal "amusement park," which supplies diversion though not much physical recreation.

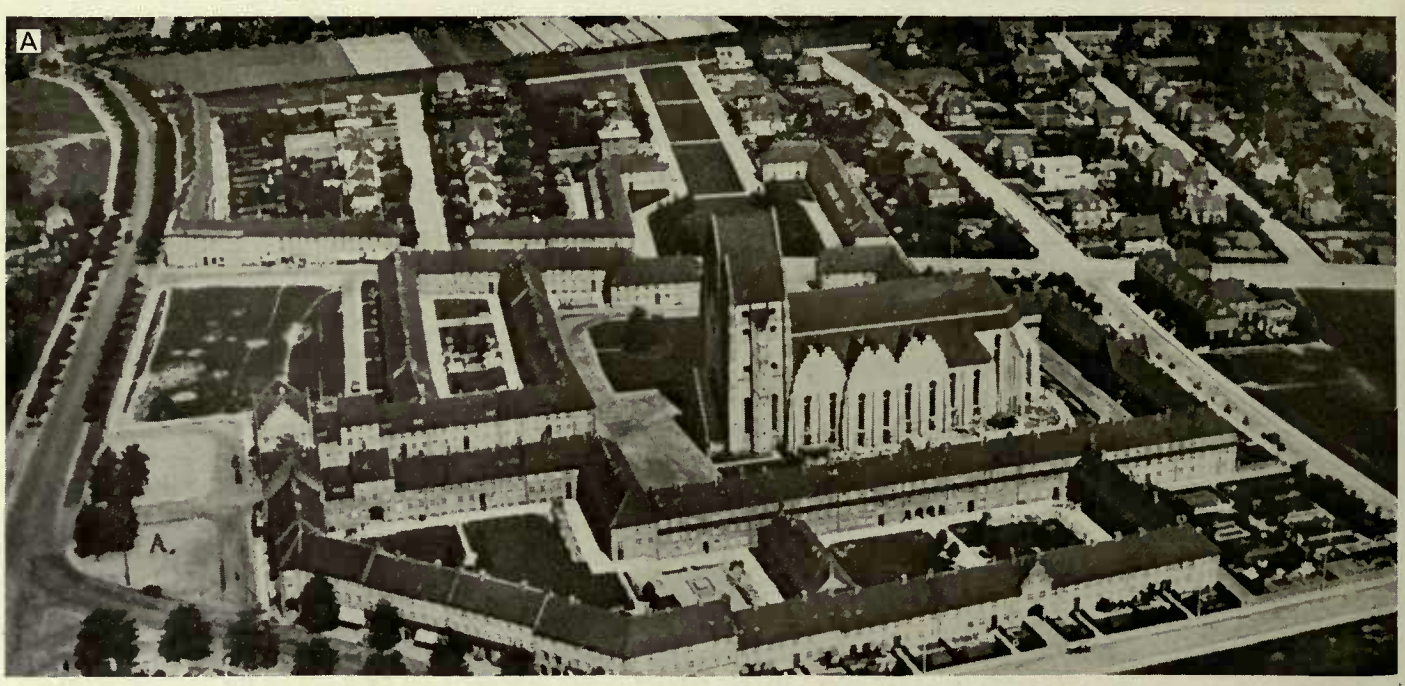
With the exception of lumber, Denmark produces all essential building materials. The traditional construction is of brick walls, either exposed or stuccoed in bright colors, roofs of tile which are often deep plum color. *Plate XXVI, B, p. 86.* Although there is abundant material for concrete it has been little used in dwellings, either for walls, floor, or public stairs. The conservative attitude of the loaning companies is said to account for this. Certainly it is not for lack of technique, for concrete is cleverly used in commercial structures.

The plans and the equipment and finish, both inside and out, are extremely simple. Because of frosty winters, foundations go deep enough to afford basements, which are used for storage for bicycles, perambulators, laundries and tenants' fuel, other storage being in the attic. The ceiling height is normally $8\frac{2}{12}$ feet, and the ratio of glass to floor area is exceptionally high—1:7, as we are told by the authors of "Housing." Traditionally heating is by tall, slender stoves—usually surfaced with bright colored tile, but in 1937 central heating had been installed in at least one group of middle class apartments. Bathrooms are usually in an interior location, with toilet, basin and shower—quite compact. *Plate XXV, $D_2$, $D_3$, p. 81.* Cooking is by gas. Social services, such as day nurseries, are seldom found.

The architectural characteristic of the newer Copenhagen apartments is a general use of the balcony, consisting of an ample cantilevered slab extending as a continuation of the living room floor, a light iron railing, to which are attached sheets of corrugated asbestos ("Transite"), surmounted by flower boxes. The asbestos is often painted in bright airy colors—Indian red, ochre, pastel blues, pistachio, etc. In summer the balconies are gay with flowers and usually shaded by an awning or a gaily colored beach umbrella. Imagine, if you can, an unbroken sunlit stretch of these houses six or eight hundred feet long, with such a colorful balcony for every unit on each of the four floors throughout the row, all against a background of slightly tinted stucco, topped by a roof of deep red tile. This balcony feature, with the added color, makes it possible to keep the wall severely simple. A very sane and alluring architecture. *Plate XXV C, p. 81.*

[83] The data in this paragraph and these tables are from Balsen "Rents, etc.," op. cit., pp. 207, 209 and 211.

[84] Many of the facts in this paragraph are from "Housing," Vol. I. op. cit., p. 394.






A. Grundtvigskirken. Housing grouped about the church in medieval tradition. (Only part of the development is seen.)

$B_1$, $B_2$. Traditional domestic architecture, using stucco and highly glazed tile.

C, D. Apartments on the perimeter of the city.

E, F. Valby suburb. E. Row cottage. F. The most economical type of apartments.








A1, A2. 1930. Kvarnholmen. *For plan see Plate XXIX,*
B1, B2. Torsvik. Hillside houses over stores, with continuous garden terraces.
C. Apelviken, a cottage estate.
D. 1937. Erikdal. Note low stores between buildings. *See Plate XXIX, B1, B2.*
E. The "Magic House". *See Plate XXIX, C.*





## Housing in Sweden

### *The General Picture*

Some fairly spectacular housing has been done in Sweden. Returning tourists have given it much publicity. Tall and long gleaming new apartments near the center of Stockholm stand out boldly against the blue sky as the tourist views them from the small steamers which ply the lake shore of the "Venice of the North." By auto he is driven out into the suburbs and countryside to see the "Magic Houses," made from prefabricated sections, put together by the owner, his family and his friends. They are well worth while, but how do they fit into the national housing program —or is there one?

To begin at the beginning, Sweden is populated by Swedes and no others, except a sprinkling from neighboring Scandinavian countries—and all have the same religion. The Swedes are a vigorous, industrious, intelligent people living in a land bountifully blest by nature with forests, coal, iron and many other ores; streams rushing down from the snow-filled mountain ravines to generate electricity to the tune of eight million horse power, streams that run on through fertile lowlands to placid lakes, which overflow into the tidewater harbors. Need we add that the people are prosperous and the nation wealthy? With a population but three-fourths that of Holland she has an area fifteen times as great, a federal revenue almost one and one-half times as great; with an area over ten times that of Denmark, and a population nearly twice as great she has a revenue roughly seven times as large. Though in form the government is a constitutional monarchy, it is in fact a democracy successfully seeking to develop a well-balanced social order. Yet for room overcrowding, and that to an almost incredible degree, Stockholm, the capital city, is outstanding amongst great cities. That has been her chief housing problem. To some extent, no doubt, the severe winter climate has been responsible for the tradition, and traditions stick like burrs; no doubt, also, high rents and arbitrary landlords have contributed, but a more significant fact is that a smaller part of income goes for rent in Sweden than in most countries of Northern Europe. This condition was accentuated by the rapid growth of population—more than doubling itself from 1890 to 1937.

Two accomplishments of unusual interest arrest our attention in the progress of better housing in Sweden. The first is the plan of the City of Stockholm to relieve housing congestion in the center of the city by developing garden suburbs. The second is the highly developed system of coöperative building societies which came into existence almost as though by spontaneous combustion—from fiery tenants protesting against exorbitantly high rents, against a general arbitrary attitude on the part of many landlords. Back of these two movements has been the State Mortgage Bank which has been resourceful and Coöperatives in making money available at low rates of interest for both private and municipal housing. Taking advantage of these movements and agencies, there is the accomplishment of the state in supplying adequate housing for the poorer families in general and in particular for the large families. In sum the policy has been chiefly to encourage private building and only to a very limited extent subsidized building. Slum clearance has scarcely been begun.

### *Garden Suburbs and the "Small House"*

In the first years of this century, Stockholm realized that the seriously increasing congestion in the center of the city was not going to stop of itself, that it was up to the city to do something. Garden suburbs had proven their worth in England and Ebenezer Howard had written "Garden Cities of Tomorrow." Stockholm's answer was a bold one. She decided herself to buy up great tracts of land in the suburban area and create garden suburbs, make the land available at prices approximating cost, with the hope that the multitudes in the center of the city would then be able to spread out in houses large enough for their families —instead of crowding parents and children into apartments of one and two rooms for cooking, living and sleeping. The first land was bought in 1904 in Endske, to the south of the city, a town plan was adopted in 1907 and the first house built in 1908. A development in Broma to the west soon followed, then others. The total area thus acquired was twenty-one thousand acres in 1936, fifteen times larger than the area of laid out parts of the inner city. People with means flocked out, but the great multitude remained in the center of the city.[85]

For the first twenty years the cheap land had not accomplished the main objective of getting families of low income out of their congestion and into the open. In 1927 the city decided to experiment in making the houses themselves as cheap as the land—through partial standardization of designs, quantity production of materials and through labor supplied largely by the prospective owner. As the city retained title to the land, leasing it for sixty years, there was *no capital required for purchase of a lot.* The city had in storage the lumber, all cut to the required lengths, the material for walls prefabricated in handy sections, likewise forms for the concrete foundation walls, and a press for making concrete blocks on the site. Plans and limited supervision were supplied by the city's Small House Bureau.[86] With this set up, an able bodied workman putting in his week-ends, holidays and daily after-work hours in the long northern summer days, with the aid of family and friends, can build the greater part of his own house. The chimney, the heating plant, the electrical work, plumbing, etc., are usually done by contractors. This procedure calls for

[85] "Garden Suburbs of the City of Stockholm. Some Official Data"—City of Stockholm Real Estate Office, 1936, pp. 1, 2, 3 and 4.

[86] "The Small Housing Scheme of the City of Stockholm," Axel H. Oxholm, U. S. Printing Office, Washington, D. C.

only a small outlay of cash, which can be had on easy terms from the city.[87] In the first nine years, 1927–36, this scheme produced twenty-one hundred houses. If we assume the size of the families to average five, these houses had a population of 10,500, or less than one-fourth the total of *all* of the 42,600 garden suburbanites.[88] The total population of the city was about 550,000 at this time.

Not everyone could avail himself of this type of home. First the applicant was required to have a good steady job, and to be physically fit to do a reasonable portion of his own work, then preferably he should have a family of children, and be engaged in an indoor job—a factory hand, conductor, stage hand, clerk. In other words, he and his family should definitely be in a position to profit by a more open environment. He could borrow from the city up to 90 per cent of building costs, on a 30 year first mortgage loan at a rate usually of from 4 per cent to 5 per cent. Actually the average loan is for only 72 per cent of costs. The total cost of the house was from K. 10,900 to K. 13,000.[89] The prospective owner was required to make the down payment of K. 180 and pay K. 300–K. 400 annually, which goes for interest and amortization on loan, lease of land, taxes, water, refuse collection, chimney sweeping—done by the public to prevent chimney fires, which are a menace in groups of frame houses. Laborers, artisans and clerks have built about all of these houses, but the fact that up to 1936 only 3.6 per cent of the number were *common laborers* indicate the income limitation.[90] Concerning incomes, which affect the price of the house and the rate of rent, we will have more to say under "Budgets."

To complete the picture of house and grounds: The finished suburbs with planted streets, sewers, water, electricity, are located from two and one-half to eight miles from the center of the city. Most workers living in the nearer locations make the trip on bicycles—though trolleys and electric railroads are available at fares amounting to about K. 8 a month. The lots for these so-called "Magic Houses," are relatively wide and vary for the smaller houses from 4200 to 6000 square feet, for the larger ones up to 7500. Houses are set back from the street to allow for shrubbery and flower gardens in front and a small garden in the rear, but designedly not enough for a subsistence garden. Once the labor of building the house is done, it seems to be assumed these workers will be more heathfully occupied with recreation than small-scale farming—moreover, being city men we may well question if it can be wisely assumed that any large proportion would have the necessary knowledge and skill, without special training. The fact that Sweden is a more northerly climate and has a shorter growing season than Germany, for instance, may have a bearing on the practicability of part-time subsistence gardens. Nearby in each community is a park and playground, as well as shopping center. It will be interesting later to compare "The Magic Houses" with the Kleinsiedlung of Germany. There are, however, garden allotments for families in Swedish cities, such as are found in Denmark and Germany, but they are entirely independent of housing. In many of these gardens are cottages which may be used for week-end stays during the summer.[91]

The houses commonly have a basement for furnace, food storage and laundry; in the smaller ones *the bathroom and laundry are combined* (an excellent idea!), toilet *separate*; in some larger houses a garage and workshop are included. On the first floor is a living room, kitchen, in some a dining room; on the second floor a generous hall and one bedroom, or in the larger houses two bedrooms and a complete bathroom (with tub or shower). Some have only one story and a basement, with living room, kitchen and one bedroom on upper floor.[92] (*See Plates XXVII and XXIX, pp. 87 and 95.*)

*Municipal Aids to Housing*

Aside from the suburban housing activities of Stockholm, the general activities of Swedish cities consist in aiding in getting building credits at low rates of interest, in providing lots at cost for large projects as well as small, in loaning a portion of the capital and in guaranteeing the government loan for the "D" type of houses, of which more later. In housing receiving public aid, the municipality reserves certain rights in regard to determining rents and conditions of occupancy.

*State Aids in Housing*

The state has encouraged the formation and activities of coöperatives and other groups. Direct subsidies were provided for general housing undertakings only in the 1917–22 period of excessively high building costs, though in 1933, 1934 and 1936 outright grants were made for limited types of housing—and on this also we will expand later. Otherwise, state aid, like municipal aid, is largely in the form of securing loans at advantageous rates for individuals and building societies.[93]

To facilitate building loans the Swedish State Mortgage Bank was founded in 1909, and lent funds on *first* mortgages up to 50 per cent and 60 per cent of the property value, against which were issued government guaranteed debentures. Action was further facilitated in 1920 by a fund for *second* mortgages (between 60 and 70 per cent of property value) with funds derived from the revenue from the state alcohol monopoly. The intent was to reduce the interest rates through the government guarantee of the loans.

[87] "Garden Suburbs, etc.," op. cit., pp. 3 and 4.

[88] *Ibid.*, op. cit.

[89] The Swedish Kroner is in foreign exchange value $0.4537 but in domestic exchange brings much more than 45¢ worth of American house.

[90] "The Small Housing, etc.," op. cit., p. 7.

[91] "Housing in Scandinavia," op. cit., pp. 78–80.

[92] "Small House Scheme, etc.," op. cit.

[93] "Rents for the Working Classes," Rep't Int. Housing & Town Planning Congress, Paris, 1937, p. 82.

Finally *third* mortgages (up to 90 per cent) were in 1933 made available to building coöperatives, through the municipalities, provided the municipality certified to the need. For the reconditioning of houses to prevent slum development and for the extension of space for crowded families, other special funds were made available in 1935, 1936 and 1937. Also, primarily with a view to combating unemployment, in 1933 and 1934 both loans and outright grants were made available for repairs to houses lying outside of the built up cities, houses which might relieve the urban congestion.[94]

Another significant state activity was the establishment in 1935 and 1936 of a fund for the erection of satisfactory dwellings for families with three or more children, families which needed reduced rents (*see below*). The communities bind themselves, (a) to supply such part of the capital as is required over and above the government loan, (b) to assume the guarantee of the government loan, (c) to supply the land free of charge. *See next paragraphs.* The rents are set at about the same rates as were formerly paid for decidedly inferior dwellings with only one room and kitchen.[95] These are the type "D" buildings referred to later. This is the only type of subsidized housing.

*Tenants' Coöperative Housing*

Out of a protest against high rents and arbitrary landlordism grew a most extensive private housing enterprise. It was in 1917 that Sweden found it necessary to pass legislation to prevent exorbitant rents. This law they were able to wipe off the books in 1923, the year after the founding of The Federal Tenants Organization, which grew to embrace 66 local associations, with a membership of 17,000. These ultimately brought about important rent reductions, especially in Stockholm. But what is probably more important: they brought about a new type of home environment for their members and better standards for housing for all Swedes of low income. These tenant organizations went further. They founded the "Savings and Building Union of Tenants," the famous "H.S.B.," which spread from Stockholm all over the country. This, combined with a few other similar organizations, founded "The Federal Union of Building and Savings Union of Tenants." In the decade 1926–35 it built 18,690 dwellings valued at 213 million kronen, which was ten per cent of all new buildings in Swedish municipalities—a good record but small compared with seventy-five per cent built by coöperatives in Holland.[96] Their membership included 200,000 families, or more than one-eighth of the total national population.

*Where do Coöperatives Get Their Money?*

In the likelihood of coöperatives coming into early action in the United States, the financial procedure is of interest. In principle Swedish coöperatives work similarly to those in Holland, but they differ in details. When a tenant wants to come into a housing project he subscribes 50 kronen for one share of stock, and, if it is for an "A" house (superior standard) he agrees to pay to the *parent* company ten per cent of the estimated value of his dwelling; for a "B" house (lower standard) he pays five per cent—all to be paid by the time he moves in and to bear interest at 6 per cent. The transactions and operations involved in acquiring the lot and producing the building are all carried on by the H.S.B. parent company. When completed the property is taken over by a Housing Society, which is a juridical and economic unit, subsidiary to the parent company. The parent company keeps all accounts, attends to sales, and supplies such necessary items as fuel, so that on the business side the subsidiary enjoys the advantages of a large scale organization with a strong financial position, having its own material centers, and even small factories and woodworking shops. On the management side the project has its own board chosen from among its own members, with various committees to look after the up-keep and *esprit de corps*.[97] These A and B dwellings, of which 18,690 were built in 1926–35, are for families completely self-supporting, while the C and D houses are for those who need some public assistance.

The C houses, sometimes known as "foundation houses," or "benevolent institutions" are, like A and B houses, subsidiaries to the parent company, but no capital is subscribed by tenants. The municipality supplies some of its less marketable suburban land and prescribes certain conditions in regard to the renting—to see that they go to families of limited means. Three members of the board are approved by H.S.B., two by the city.[98] Of such family units, 5020 were built in the 1926–35 period.

The D houses, for large families, are subsidized by the State. A national investigation in 1933 showed "that more than forty per cent of all families which have three or more children under fifteen years of age live in dwellings of not more than one room and kitchen," and among workers over fifty per cent.[99] To help clear up this situation the state gives subsidies to the extent of the amounts necessary to allow deduction from standard rents; thirty per cent for three children, forty per cent for four children, fifty per cent for five children. The municipalities on their side supply capital, over and above the state loan, in the amount required to secure the land free of charge to the society; and they also guarantee the rents. The minimum size for an apartment is 2 rooms and kitchen, and, while severely simple, it is well lighted and well appointed. There is an attractive day nursery in each

[94] "Rents, etc.," op. cit., p. 82.
[95] "Rents, etc.," op. cit., p. 82.
[96] "Rents, etc.," op. cit., p. 81.
[97] "Hyres-Gartenos-Spar Hasse Och Byggnads-Forening," 16 p., Stockholm, 1936.
[98] "The Swedish Housing Co-operation," H.S.B., Stockholm, 1936, p. 4 and 5.
[99] "Rents, etc.," op. cit., p. 83. See also paragraph on overcrowding.

group. Plate XXVIII, G, p. 94, shows the first group, constructed in the summer of 1937.

The capital is supplied by the initial fee or subscription of members which H.S.B. uses to carry on its housing projects. In Stockholm, the arrangements are somewhat different from those in other cities; in addition to the K.50 down-payment for a share of stock, there is a payment of five or ten per cent of the value of the building, and a two and one-half per cent fee on the assessed value of the real estate payable in the course of twenty years, all paid into the working capital of the Stockholm parent society. The National Society derives its capital from the operation of a members' Savings Bank, the deposits of which are taken into a revolving fund for loaning to member bodies. The bank also issues ten-year bonds in denominations of from K.50 to K.1000, bearing interest at four and one-half per cent, amortized in annual installments.[100]

Money needed during the construction of any project is drawn from the sources just mentioned and from mortgage loans negotiated on the open market by the parent society. After completion of the project, when it is turned over to the operating society of the occupants, a first mortgage is taken out by the subsidiary society for about sixty per cent of the cost of construction, also secondary credits for about twelve to fifteen per cent. The remaining loans are granted by the local parent society and the National Union. Occasionally municipal and state loans are secured through the parent society. These must be amortized within 20 or 25 years, depending on the type of building.[101] An amount equal to the original tenant subscription is also available.

The non-coöperatively owned C and D houses are financed during construction by bank credits; after completion, partly by state loans and a five per cent loan from the H.S.B. National Union, to be repaid in ten years.

The coöperative societies are taxed on the same basis as individuals, whereas the "limited" companies are taxed in proportion to profit and share capital, which amounts to less than half the individual rate.[102] Unemployment, illness, death, or other changes in circumstances have in time come to some householders, making it necessary to dispose of or exchange their apartments. This situation is taken care of through a "*Repurchase Fund*," maintained by annual subscriptions.[103]

*The Quality of the Housing*

What of the quality of this Swedish housing? From the "Magic Houses" in garden suburbs to the great groups of nine storied elevator apartments near the center of Stockholm there is much variety. Apartments in the more open sections of the city are from three to four stories high, in toward the center five to ten; the "Roda Bergen" project is dignified, traditional, conservative architecture; the "Marmon," *Plate XXVIII, C, p. 94*, is streamlined with continuous balconies, colorful with flower boxes continuous for several hundred feet. Stucco is most often used for the exterior finish, roofs are commonly flat, though in some of the buildings red tile roofs come into the picture. The taller elevator buildings are built with concrete frames. *Plate XXVIII, B, p. 94.* About the buildings adequate space has been left for abundant light, for air, for planting and playgrounds for the smaller children. Natural recreational areas are found in the many lakes and streams—swimming and boating, skating, coasting and skiing. Apartment buildings are commonly oriented north and south, and are planned with a central public corridor and apartments on each side, each getting either morning or afternoon sun. The kitchens and bathrooms are on the interior (except in the end apartments), and are artificially vented. *See Plate XXIX, $B_2$, p. 95.* Traditionally the living room is also a sleeping room. The present tendency is to plan with less depth of room than formerly, but even in recent buildings there is still more depth than is standard in a number of other countries. The resulting lack of light is particularly noticeable where a balcony overshadows the windows. *Plate XXIX, $B_2$.* This, however, is not the type of plan used in the subsidized "D" houses, which are but two rooms deep. *Plate XXVIII, C.* Cottages are commonly oriented east and west, the living room to the south. Ceiling heights in the area of tall buildings are $8\frac{10}{12}$ feet, in the open areas $8\frac{2}{12}$ feet. The ratio of height to width of street is about $1\frac{1}{2}$ in the denser areas. The present standard of density of 40 families to the acre represents a marked improvement over standards of a few years back. Buildings may be built as high as 6 stories with bearing walls of brick; higher than that they must be built with at least partial reinforced concrete frames. The brick commonly used for exterior walls are made especially porous in order to attain good heat insulation and good bonding for the traditional stucco finish. There is an especially dense brick made for use in the lower stories of walls over 6 stories high, but when these are used there must be a cork insulation—on a wall 15 inches thick. The mean temperature for the coldest month is about 25.7°F, which calls for deep foundations, and general heating. In consequence we have basements, utilized for heating equipment, laundries, dust bins, storage and so forth. As Sweden produces an abundance of all building material, building should not be expensive.

Circular stairs are in common use, the tread and riser units being precast, and laid uniformly from floor to floor without interruption of a landing. There is no inherent objection to winders, provided they are uni-

[100] "The Swedish Housing Co-operation," op. cit., p. 6–7.

[101] "The Swedish Housing Co-operation," op. cit., p. 8, and "H.G.S.N.B.F.," p. 12.

[102] "The Swedish Housing Co-operation," op. cit., p. 9.

[103] "Sweden the Middle of the Way," Marquis W. Childs, New Haven, Yale Press, 1936, p. 22.

form and that the treads are of normal width at the narrowest useable part. This condition could be met in these Swedish stairs by stopping the tapering end against a curb and relocating the hand-rails further out from the core of the stairs.

*Incomes, Budgets and the Amenities of Life*

Over-crowded municipal dwellings in 1933 were 13 per cent of all dwellings in the municipalities; they were occupied by twenty per cent of the population and by almost thirty per cent of children under fifteen years of age. There was a lack of adequate drainage and water supply.[104] In short the slums remained, and still remain, for not enough new houses have been built to change the general situation fundamentally.

The *incomes* and the *budgets* of families occupying low-cost housing reveal that an appreciably smaller proportion of income goes into rent in Sweden than in the United States and even less than in most other European countries. Before the government undertook to prohibit high rents the percentage of income going to rent for the old houses was 12.7 per cent; under rent control, 9.8 per cent; ten years later, after H.S.B. had set standards for larger dwellings in order to overcome room overcrowding the rent item was 14.3 per cent of the income—all this in the household of manual workers, clerks and minor officials. For families with children under working age the proportion for rent is about 16.5 per cent. The other items of the budget are: heat and light 4 per cent, miscellaneous taxes 6.6 per cent, clothes 12 per cent, food 35 per cent, other items 27.3 per cent.[105] But renters get something more than an apartment.

The *nurseries* are in effect *kindergartens*, containing besides a sleeping room, a playroom, dining room and kitchen, workrooms for the older boys and kitchens for the older girls. In a central H.S.B. kindergarten office the daily program is drawn up for all branches. The nursery work has become so important that the H.S.B. in Stockholm maintains a well appointed pedagogical school for the nurses—a two year course. In addition to this there are "children's hotels," where children may be placed during the illness or absence of their parents, which is a common occurrence, as 35 per cent of the mothers in low-cost housing have outside jobs. Modest fees for both the day nurseries are K.1 a day for one child, increasing up to K.1.60 a day for four in one family, and 10 ore per hour; for the hotel, K.2 a day. A Children's Summer Home located on the water front about 18 miles from the city, is maintained by H.S.B. Here a number of children of the lower income groups are received free of charge and parents may rent or buy summer cottages nearby.

To further ease the burden of the mother who must work outside the home, one architect, Sven Markelius, carried the coöperative idea further. His Kollectivhuss, built in 1935, has a coöperative kitchen from which meals are served in the restaurant, or in the apartments via the dumb-waiter. *Plates XXVIII and XXIX.* Housework may be done through a staff of coöperative servants, and the baby left in the coöperative nursery. One may be mother, wife and worker but still not qualify as housewife. This idea has in it elements which might lead to larger families among women who work out—not an ideal but, as yet, a frequent expedient.

Under the charge of a *Tenants' Club Union* of Stockholm there is a social center where tenants may pursue formal studies, athletics, dramatics, and what not. Here theatre tickets may be had at reduced prices through wholesale purchase, and arrangements can be made for family excursions into the country. At the *Tenants' Furniture Shop* well designed furniture can be had at a low price and advice may be had from a decorator who will further undertake the fitting up of apartments. Manufacturers have been smart enough to produce simple, small-scale furniture, suitable for small rooms. *See Plate XXIX, I, p. 95.* Food and all other necessities may be had at the organization's *coöperative stores.* They have bought or built factories when necessary to obtain reasonable prices. At their Three Crown Flour Mills interesting housing projects have been developed for the employees. *Plate XXVII, $A_1$, p. 87.* Thus through their cooperatives, families in Stockholm may enjoy many advantages for wholesome and efficient living in addition to those of good housing.

*What Class of People Is Housed?*

What class of people has been housed? Obviously most of these coöperators have a fairly secure income, even if small, and they are not former slum dwellers. On the other hand those in the "C" houses, the "foundations," may be from the slums; yet even they are carefully picked. Applicants for these houses, who are located by advertising, must give their complete family history, which is checked and followed up by an investigation to ascertain if their houses are properly run, rent paid, etc.—for no careless or uncooperative family is accepted, only those "who will add to the character of orderliness and comfort." *Those receiving relief will be accepted only in the proportion to which they are represented in houses in general and only under the condition that the municipality, if necessary, pay the rent.*[106] The same care is taken with the "D" houses, for large families. There is no provision for the uncoöperatives, the "undesirables," as in Holland.

About Rural Housing we have said little because, we believe, it is in the city and suburbs that the most significant work has been done. But the rural areas have not been overlooked in Sweden's program.[107] In rural towns the condition of a state loan is that the

[104] "Rents, etc.," op. cit., p. 83. See also in this Chapter paragraph on houses for larger families.

[105] "Rents, etc.," op. cit., pp. 83 and 79.

[106] "Swedish Housing, etc.," op. cit., p. 5.

[107] An interesting account of rural housing and colonization is found in "Housing in Scandinavia," op. cit., pp. 152–228.

communities supply free land. Then the government advances a 45 per cent loan redeemable in 40 years by an annuity of 4.5 per cent inclusive of 3.5 per cent interest; the Federal Union of B.S.U. advances a 5 per cent loan redeemable in 10 years at the rate o 12.79 per cent a year, including 4.75 per cent interestf the remaining 50 per cent is raised by an open marke; first mortgage for ten years bearing 3.75 per cent interest. There is an additional charge of about 2.t per cent—presumably for a revolving fund.[108] 5

TABLE XI. A CLASSIFICATION OF DWELLINGS ERECTED IN SWEDISH TOWNS 1925–35*

| | Numbers | Percentage |
|---|---|---|
| 1. One and two family houses, mostly private | 39,580 | 21.9% |
| 2. Stockholm's "Small Houses," or the "Magic House" | 2,180 | 1.2% |
| 3. Houses erected with aid from national government | 980 | 0.5% |
| 4. Houses erected by municipalities | 5,290 | 2.9% |
| 5. Houses erected by Co-operatives (including the "D" house) | 18,690 | 10.4% |
| 6. Houses erected by "Foundations" (philanthropic) | 5,020 | 2.8% |
| 7. Houses erected by Employers | 740 | 0.4% |
| 8. Private Apartment houses | 108,270 | 59.9% |

* "Rents, etc." op cit., condensed From Table I, p. 73.

*Conclusion*

We have given this rather full account of Swedish housing and the financing of it because it has demonstrated that people who are steadily employed, even those at relatively low wages, can do much for themselves with a minimum of aid from government, whether national or municipal. It has also demonstrated that for those of still lower incomes there is the need of a certain amount of government subsidy, as appears in the accompanying table (Item 6 and the "D" element in Item 5), which, if brought up to date so as to include all the housing for large families (which is a recent activity), would make an even better showing. Despite the fact that much over-crowding and bad conditions still exist, Sweden has gone a long way and made a fine contribution toward the solution of the problem of better housing for the masses of the people.

## Housing in Germany [109]

*The General Picture*

Notwithstanding her demands for more space and opportunity in the years before World War I, Germany, with her extensive colonies, her great industries and foreign trade was one of the most prosperous areas of the globe. There was a good, though not complete supply of coal, iron and other essential minerals, abundant and well developed forests, good water power, lakes and large navigable rivers, prosperous seaports on the North Sea and on the Baltic. While the soil is not rich, with the aid of fertilizers it has produced good crops in variety. The rainfall is good, the climate equable—the summers everywhere mild and the winters varying with a mean temperature of 34° at Cologne in the southwest to 22° in the northeast. For over a century education had been compulsory and under the direction of the state. While the school age extended from six years to only fourteen, there were but ten weeks of vacation throughout the year. True the curriculum for the girls was not the same as for boys, nor that for students of limited means the same as for those of more abundant means. Poor laws and workmen's insurance were of long standing.

*German Housing Prior to the National Socialist Regime*

Germany's experience in housing has been varied and colorful. In the latter half of the last century and the early part of the present the various steps taken to overcome the general condition of extreme over-crowding and to raise the standard of home environment followed somewhat along the same lines as England's up to the outbreak of war. Housing by industrialists for their own employees, the development of coöperative building groups, and, to some extent city planning, almost paralleled British experience; but the broader policies of slum clearance and low-cost housing for the masses lagged behind, due in part to the formidable nature of the task. Four and five story tenements at front and rear of lots covered great central areas of the cities.

During World War I and as a war measure, various cities had placed at the disposal of their population large tracts of municipally owned suburban land for the raising of vegetables, subdivided into family gardens on which were tiny camp cottages, sometimes little more than a tool shed, where the city folk could spend the week-ends while gardening. In a practical way, though to a limited extent, these gardens brought to the large cities some of the advantages of the English Garden suburbs. As the Germans delight in gardening, these Schreber Gardens were quite popular, but according to the office of the Ministry of Labor (which is now in charge of housing but not of these gardens) the verdict of 1937 was that these gardens were not entirely successful because too many city people were not competent in the raising of vegetables—though they may have been in the raising of flowers. The scheme was made possible by the fact that the cities, following their ancient custom, had previously acquired large tracts of open land in the adjoining sub-

[108] "Rents, etc.," op. cit., p. 83.

[109] The material in this section was written several years ago, before the outbreak of World War II. Major Gray had been planning to revise it in line with the drastic developments since that time, but the burden of preparing other parts of the book, combined with his increasing ill-health, prevented this.

The publishers are, therefore, including the section virtually as it was originally written, as they feel that the material prepared by Major Gray should be admitted to the picture as a matter of record, even though the actual situation has been so greatly altered by the war.







Note: All of Stockholm except F. All but A and G are cooperatives, designed by their architectural staff.

A. 1935. Kollektivhuss. *See Plate XXIX, A.*

B. 1936. Kungsholmen.

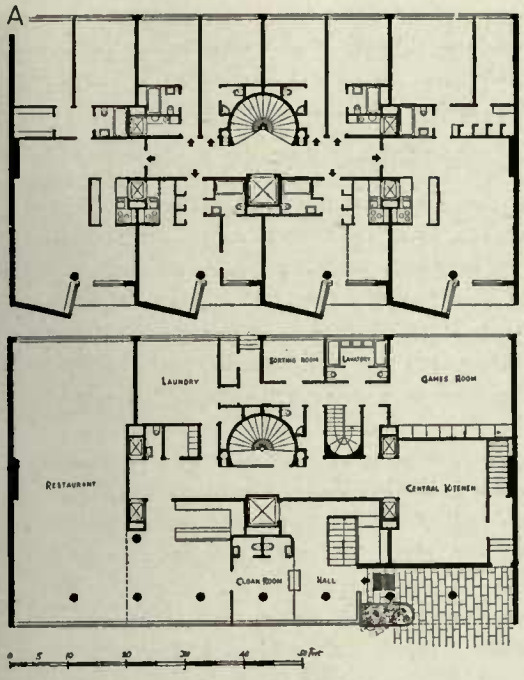
C. 1936. Marmon.

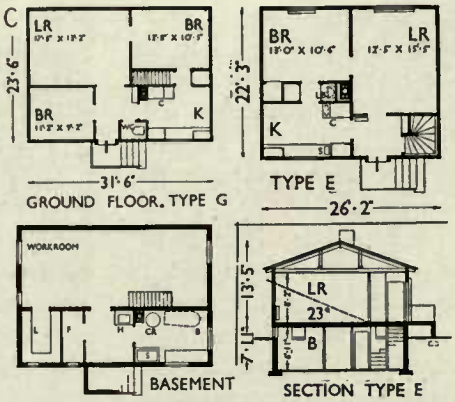
D. 1932–35. Kristinberg. Note simple treatment of roof and eaves.

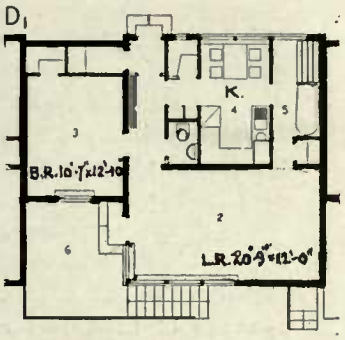
E. 1937. Fredhäll. Note change in floor level, indicated by roof line.

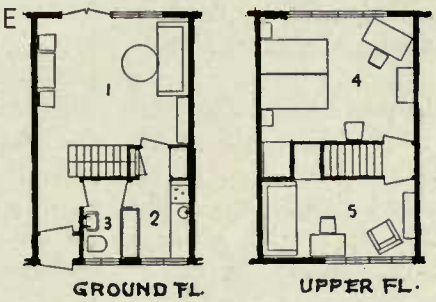
F. 1937. Malmo. Riberhuss.

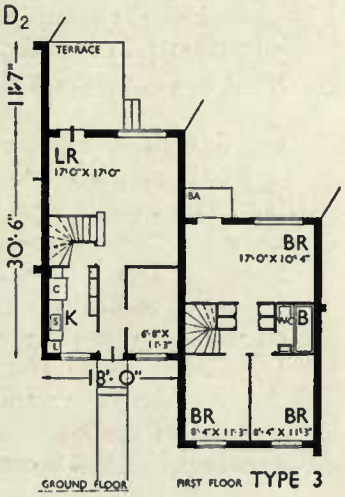
G. "D" type houses, the first built.

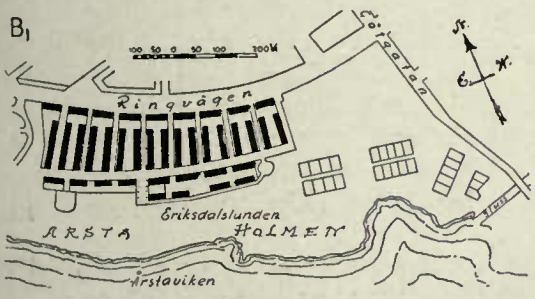




A. Kollektivhuss. Note large windows in small apartments in rear and interior location of kitchen and bath, with vent duct. Sven Markelius, Arch't.

B. Eriksdal. *See Plate XXVII, D.*

C. One type of "Magic House". *See Plate XXVII, E.*

D. Kvarnholmen. $D_1$. Unit plan of houses in foreground of $A_2$ Plate XXVII. Privacy in porches. $D_2$. Privacy in gardens.

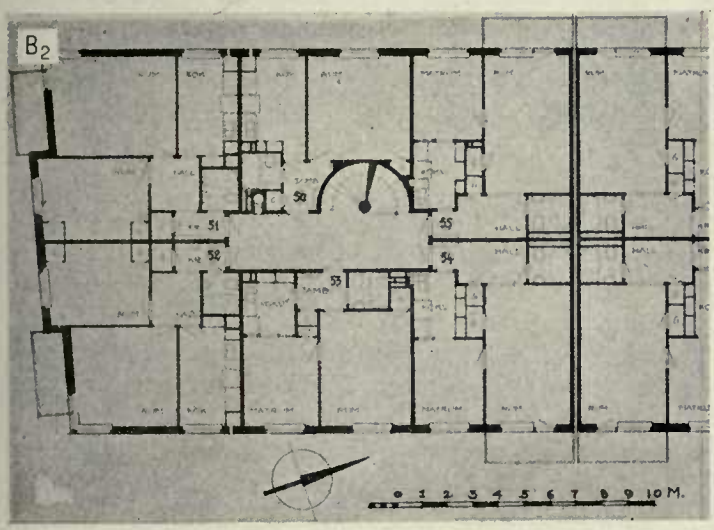
E. Competitive plan for row houses, showing unusual location of bath and kitchen.

F. Balcony, with canvas windbreak.

G. Simplicity in the garden terrace.

H. Glass front and low furniture result in good lighting of deep rooms. Simple, well-designed furniture in scale with room.

I. Furniture in scale.







urban areas. Such land had also made possible the planning of modern suburbs to relieve congestion in the central areas. But, as in other countries, only those who had some capital and credit had found it feasible to move from their old quarters; so the masses remained in a state of urban congestion.

A special procedure for assembling land in the oldest obsolete sections of cities was developed in Hamburg in the 1890's. Following this Burgomaster Adickes of Frankfort after nine years of resistance, succeeded in 1901 in getting legislation passed which authorized the municipality to *require* the pooling of all property in any city area designated for development and to demolish all or as many buildings as were deemed necessary, then to replan the improvements, and to each contributor to the pool to allot a new lot or lots in proportion to the value of his original holdings. In Prussia and in many cities elsewhere in Germany there followed similar legislation under the name of Lex Adickes.[110] The application of such legislation in United States is discussed in the chapter on Neighborhood Rehabilitation.

After World War I, for several years Germany was too nearly down and out to do anything about her problem of over-crowding. Extreme before the war, over-crowding had become so acute during the war that people of the city were occupying the summer shacks and even tool houses in their Schreber gardens. Not until the reconstruction of a stable finance in 1924 was the government able to plan a solution. Mortgage loans (incurred under the old deflated currency which had collapsed by 1924) were largely repudiated—except for about 25 per cent of their value; but this relief was largely offset by establishing a special tax on such properties. The funds raised by this tax were applied to a considerable extent to granting mortgage loans on new buildings to be constructed.[111] These loans amounted to 5000 million marks[112] for a new building, to which was added 3700 million raised by the Reich, by the State and by communal governments.[113] This movement was intensive while it lasted but came to an end with the financial crisis of 1930. The housing built was internationally recognized as an important contribution to housing technique. The volume amounted to an increase of 25 per cent in the low cost housing of the entire nation (mostly in urban areas), and in the Frankfort-am-Main area as high as 30 per cent. There are excellent accounts of this housing from the angle of design in Henry Wright's "Rehousing Urban America,"[114] and from the economic point of view in Katherine Bauer's "Modern Housing,"[115] so that we will not go into the details here.

*Housing Under the National Socialist Regime*

Under the National Socialist Government the Nazi housing has been conceived as an employment relief measure, in which working class dwellings alone participate. This policy arose out of the fact that, as von Schenk tells us, "A very large part of the housing created in latter years was well nigh beyond the means of the working class and other economically equivalent sections of the population because of rents and encumbrances."[116] As late as 1937 Germany was planning to make up a deficit in her housing, amounting to 2,000,000 units of which 1,000,000 were to replace slum dwellings, the other entirely new. To carry out the new policy several types of housing were planned. Popular dwellings for the poorer strata of the nation, especially for the low-paid workers, "must be plain but durable and preferably built in bungalows or in buildings of not more than two floors" (with certain exceptions) and "A garden or a piece of land is added to each dwelling if possible." These "Colonies" were conceived particularly for workers in the building trades who were out of employment and could work on their own houses. Rents were not to exceed one-fifth the average income of the working population. The government aid, in carrying this phase of the program, consisted of a loan of R.M.1,500 on a dwelling not to cost over R.M.3,500 —though under special circumstances both loan and capital outlay could be larger. The loans were to be made to the local authorities and by them to coöperative building associations and to bear interest at 4 per cent plus an amortization fee of 1 per cent.

Another very economical type of housing was the rehabilitation or conversion of obsolete buildings into small apartments—such buildings as large dwellings and even factories and business premises, many of which were acquired through foreclosure for taxes. It was the unemployed who were to occupy these dwellings, which were recognized as less desirable than new houses. For these buildings the government granted outright subsidies up to R.M.1000. This aid was so much in demand that the government had to limit operations to winter, the better to alleviate unemployment in the building trades during that season.[117]

Outright slum clearance had gotten under way in a number of towns, through special funds assigned to this work by the Reich. "Usually the slums are

[110] The law, in whole or in summary, is given in The Law of City Planning and Zoning by Frank Backus Williams, Macmillan Co., New York, 1922, pp. 466–497.

[111] "Financing House-building for the Lower Classes"—Report International Housing & Town Planning Congress, Paris, 1937, p. 71. Section on Germany by Ministerialrat a.D.Eberhard von Schenk, Beigeordneter des Deutschen Gemeindetages.

[112] The value of the mark has varied considerably in foreign exchange but prior to 1939 was nominally worth between 40 and 50¢ in U. S. currency.

[113] "Financing House Building for the Lower Classes," op. cit., p. 71.

[114] "Rehousing Urban America," Henry Wright, Columbia University Press, 1935, pp. 86–96.

[115] "Modern Housing," Katherine Bauer, Houghton, Mifflin, New York, 1934.

[116] "Financing House-building for the Lower Classes," op. cit.

[117] "Rents for the Working Class," Report of International Housing & Town Planning Congress, Paris, 1937. Section on Germany by Ministerialrat Dr. Ebel, Reichs- und Preuss. Arbeitsministerium, Berlin, p. 12.

completely torn down," but "in many cases it was found sufficient to remove the back buildings, as thereby the front buildings got plenty of light and air." The object of this, "up to now, is to collect experience regarding the best method for dealing with slums. Slum clearance on a larger scale will be started after ... the provision of new dwellings in sufficient numbers."[118]

*Kleinsiedlung or Subsistence Homesteads*

The phase of housing on which the present government has been placing most stress and which, in my judgment, is the most interesting and significant, is the new subsistence homestead—Kleinsiedlung. Their significance lies not only in their place in the field of housing, but in the fact that the scheme is so definitely a part of a unique national economy and social culture.

As the new government was opposed in principle to an increase in nominal wages, there was need for workers' homesteads which would not burden the worker's budget by more than twenty-five or thirty marks per month. The aim is "*the linking of the German worker to the soil*" and to assure him of (a) subsistence in case of unemployment, (b) a better standard of food at all times, (c) to inculcate pride in home, and (d) inculcate habits of work and thrift in the children, who help with the garden and the animals."[119] Or, as it was put in a conference which I attended in the summer of 1937 with officials of the Ministry of Labor: "The program is intended to make it possible for the maximum number of workers to own their own homes, become loyal non-communistic citizens and to increase the subsistence supplies of the country, while maintaining a steady supply of labor for industry."

There are three sizes of these homesteads: the smallest cover about one-fourth of an acre and are suitable for those with small or average families; the next size is for those with large families, especially those having some children of an age to do substantial work in the garden; a third, of much larger size, for families which include some who can put in all or a large portion of their time on the farm. The first two sizes are for full time industrial workers and are near the factories; the largest ones are in the more rural areas, though still within reach of the factories for part-time work during periods of peak production. Under this scheme the industrial population is encouraged to live on the rural side of the plant in which they work. The local industry, which is regulated by the Ministry of Labor, acquires the land and does the planning for the subdivision or settlement in conformity with the standardized plans and requirements of the Ministry of Labor, though the government in 1937 was giving no direct subsidy—originally it remitted the ground rent. Every inch of the land was to be profitably cultivated under expert direction through the Labor Office—even the vines on the wall, the shade trees and the hedges all were planned to be fruit bearing. *See Plates XXX, p. 98, and XXXI, p. 99.* These homesteads were sold on long term monthly payments to the worker, who guaranteed his payments by *signing a contract to work with the industry the remainder of his working life and by entailing one son to take his place when his own work ceased.* The prospective owner was carefully selected; and to hold the property his labor on it was required to be prolific. To insure this, he was on trial for the first three years. Thus indeed the worker was "linked to the soil." At the start he was supplied with prescribed seeds, fruit trees and bushes, and four chickens and a pair of rabbits, if his place was one of the smallest size; if he had one of the larger places he could also raise potatoes for the winter, geese, pigs, goats, sheep (supplying meat, milk, wool and feathers) all under a plan prescribed by the Ministry of Labor. The houses were appropriately simple and direct in design—not unattractive—one story and attic, with the quarters for the animals attached to the rear, in the manner of our New England farms.

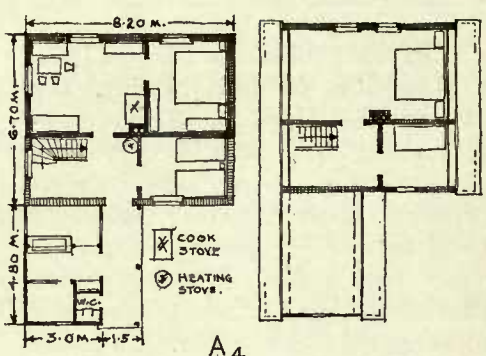
In the settlements which we visited, the w.c. consisted of a privy in the wing for the animals (with covered approach), so that the human manure, received in a concrete tank containing a certain proportion of a peat-like substance, could be composted into fertilizer, thus making a sewage system unnecessary. The street surfacing consisted of a thin layer of cinders, and there were no sidewalks. The interior arrangement of the houses was compact and attractive; a living-room-kitchen with range and running cold water, one or more bedrooms and a shower room. Heating is by means of the range and one or more built-in tiled stoves for the bedrooms. The plans were flexible so that an extra room could be added, either at one end or in the attic. *See Plates XXX and XXXI.*

This is a "back to the farm" movement, back even to the ruggedness of the pioneer. The people are called "colonists" and none but the hardiest could keep up the factory job and the homestead work. Such people readily get along with fewer amenities and will live more wholesome and healthy lives than many city people with better and more conveniences, for the plain German housekeeper is not only cleanly but a hard worker. It is a heroic measure to meet a complex and difficult national problem of subsistence. In the Reich the "colonist" is virtually in shackles, but if the character building qualities of the scheme could be undertaken in a democracy it would be ideal indeed. Again we are reminded that standards of housing for health and decency cannot be absolute and rigid, but are relative to the standards of the occupant. Standards of housing do not necessarily reflect standards of living. When a cultured up-town young couple take over an old house in Greenwich Village it becomes desirable, whereas it was formerly blighted. Some material changes there are, but the principal change is in

(*text cont'd on page 102*)

[118] "Rents, etc.," op. cit., p. 14.

[119] Von Schenk, "Financing, etc.," op. cit., p. 73.

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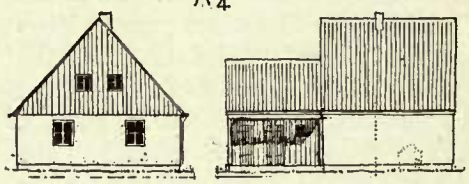
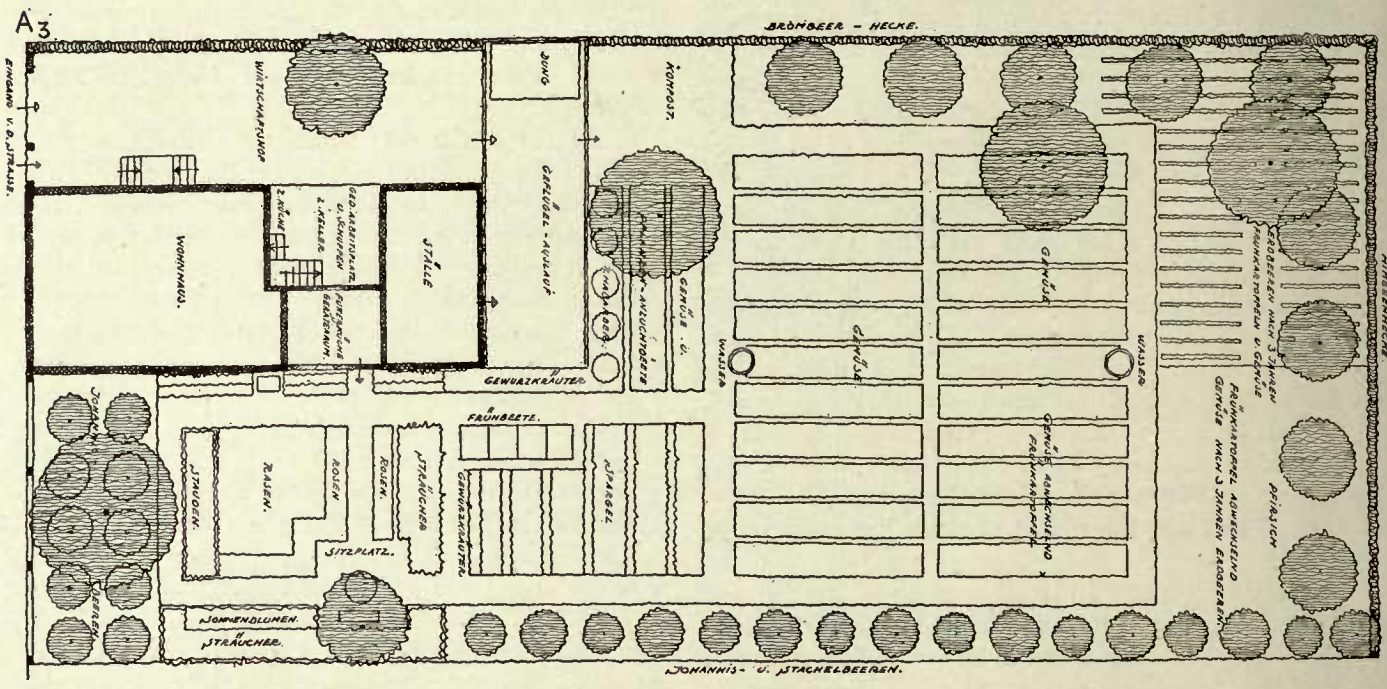




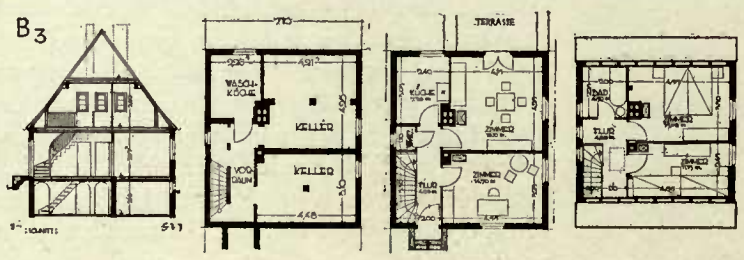
A. 1937. Berlin. Subsistance housing for industrial workers, government plans.

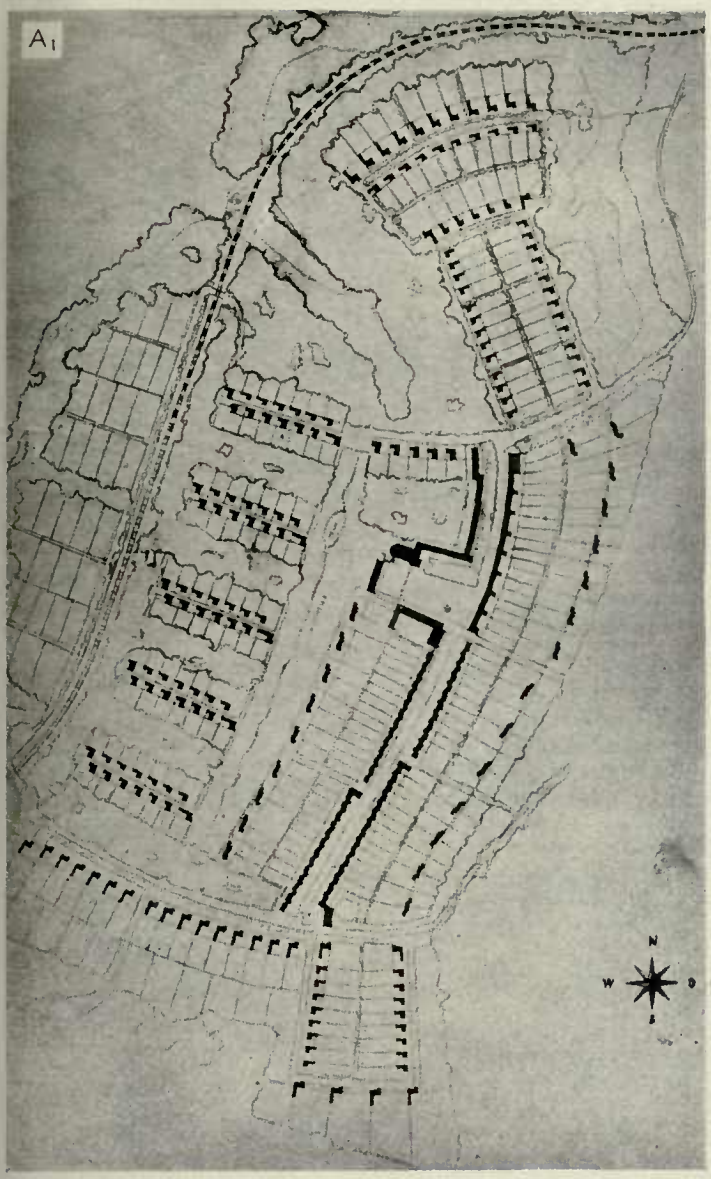
B. 1937. Standaú. (Berlin suburb). Private project with generous space for vegetable gardens. $B_4$. The complete kitchen water supply—the system in general use in German housing, and also in Danish housing.

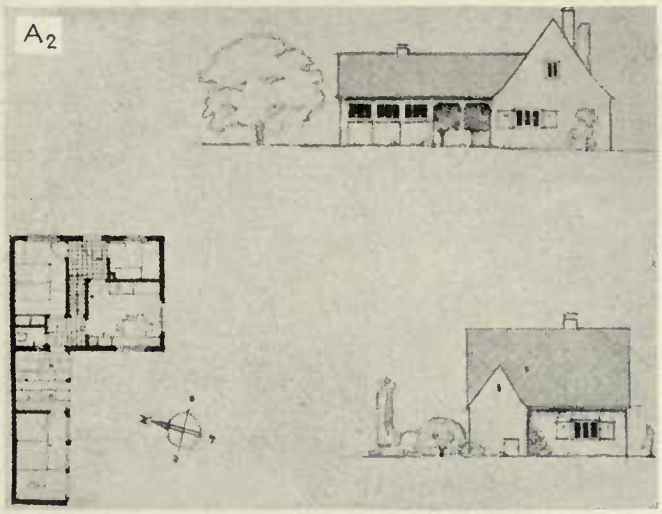


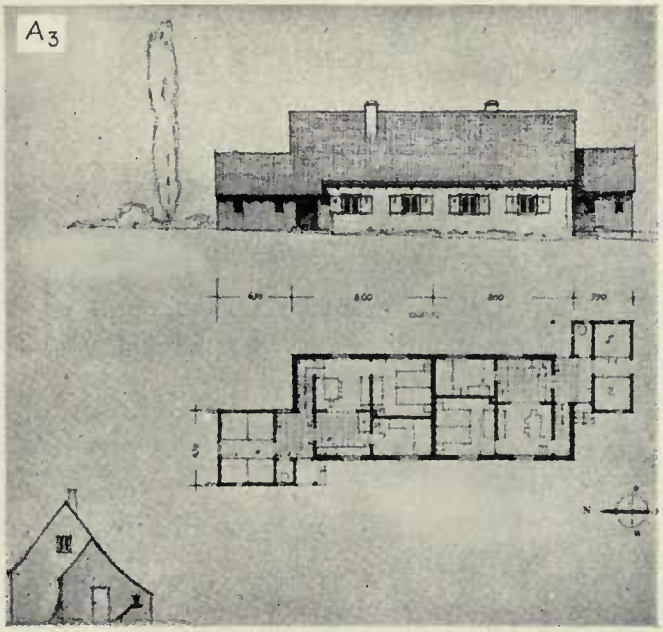


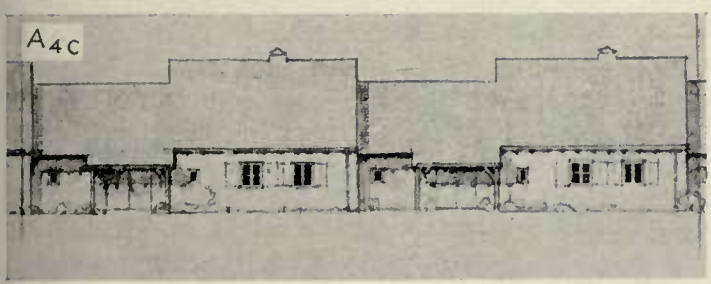


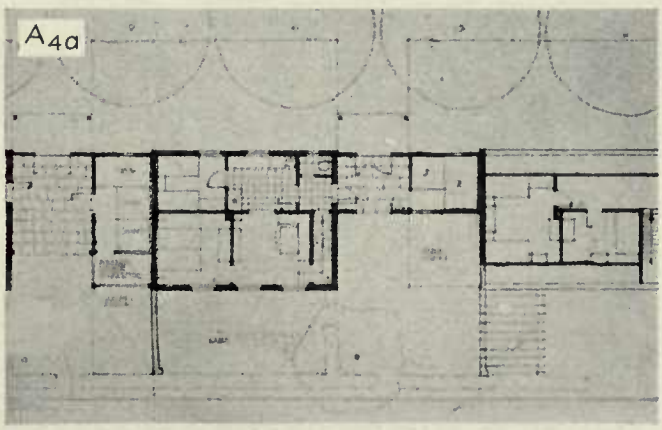




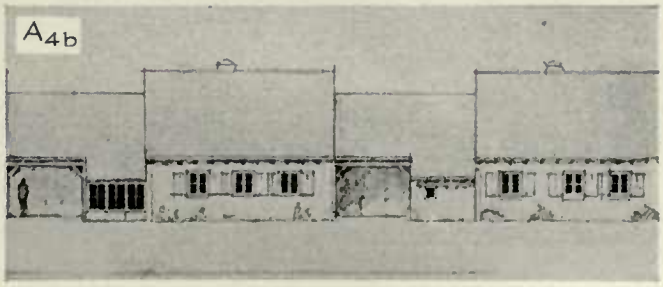



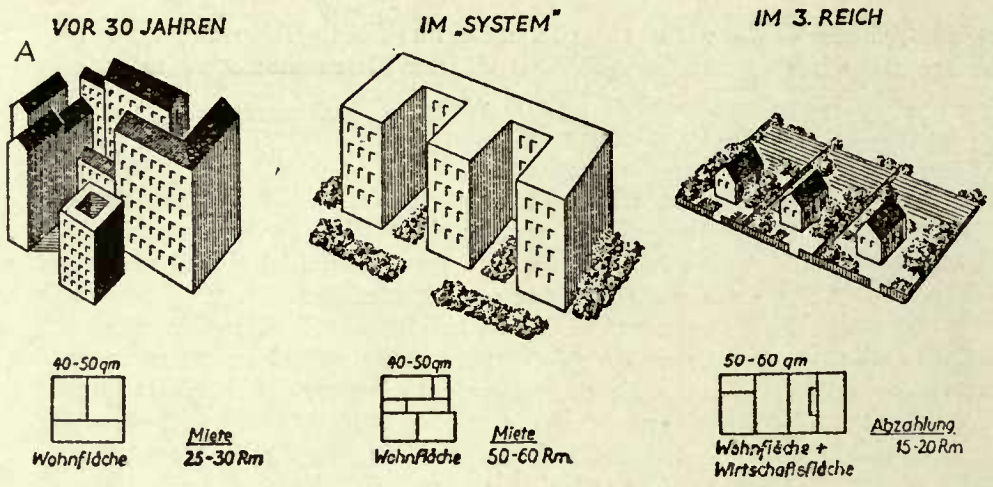





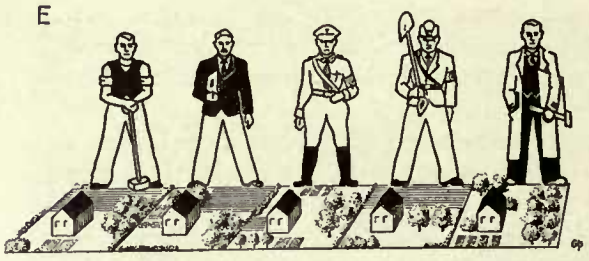


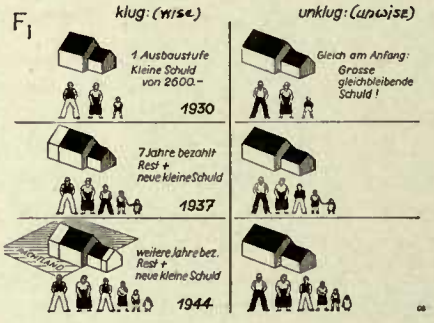

A. 1935. Wettbewerbsarbeit. Plans by the Department of Labor; simple family and row houses in which eaeh family unit has a shed for small livestock, and is separated from adjoining houses by a run-way or court. *See Plate XXXII, F.*

B. House on hillside, space for livestock in basement, an early idea abandoned in later planning.









(Historians take note: For the significance of subsistance homes see text.)

A. The Third Reich encouraged a movement from congested urban living to open semi-urban living.

B. By saving one can own such a home.

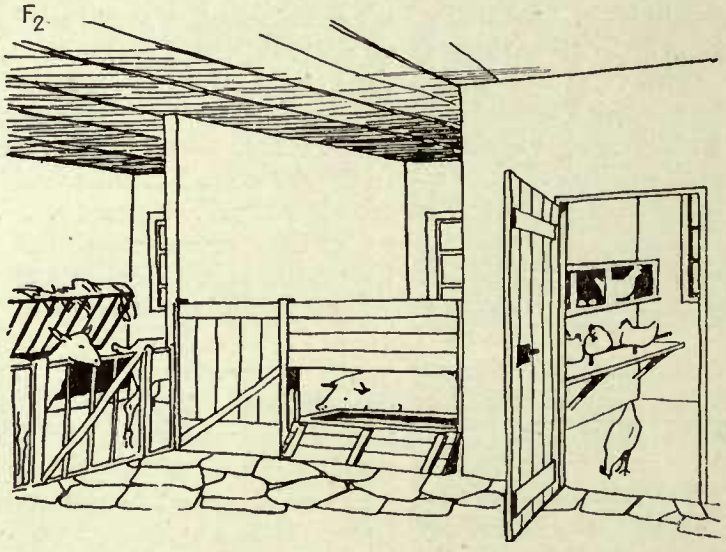
C. "My home is my castle."

D. The joy of gardening.

E. For all walks of life.

$F_1$. The house should be planned to grow with the family.

$F_2$ & G. The "stall" for raising small animals for food is an essential feature of German subsistance homes.





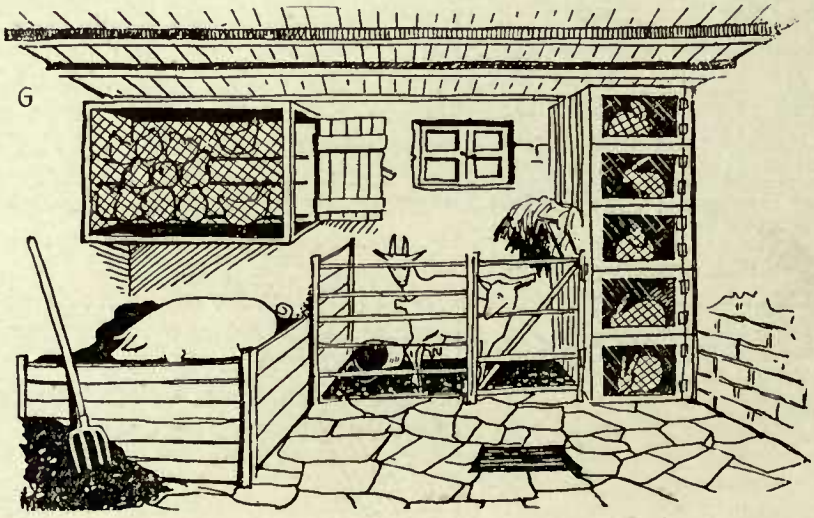
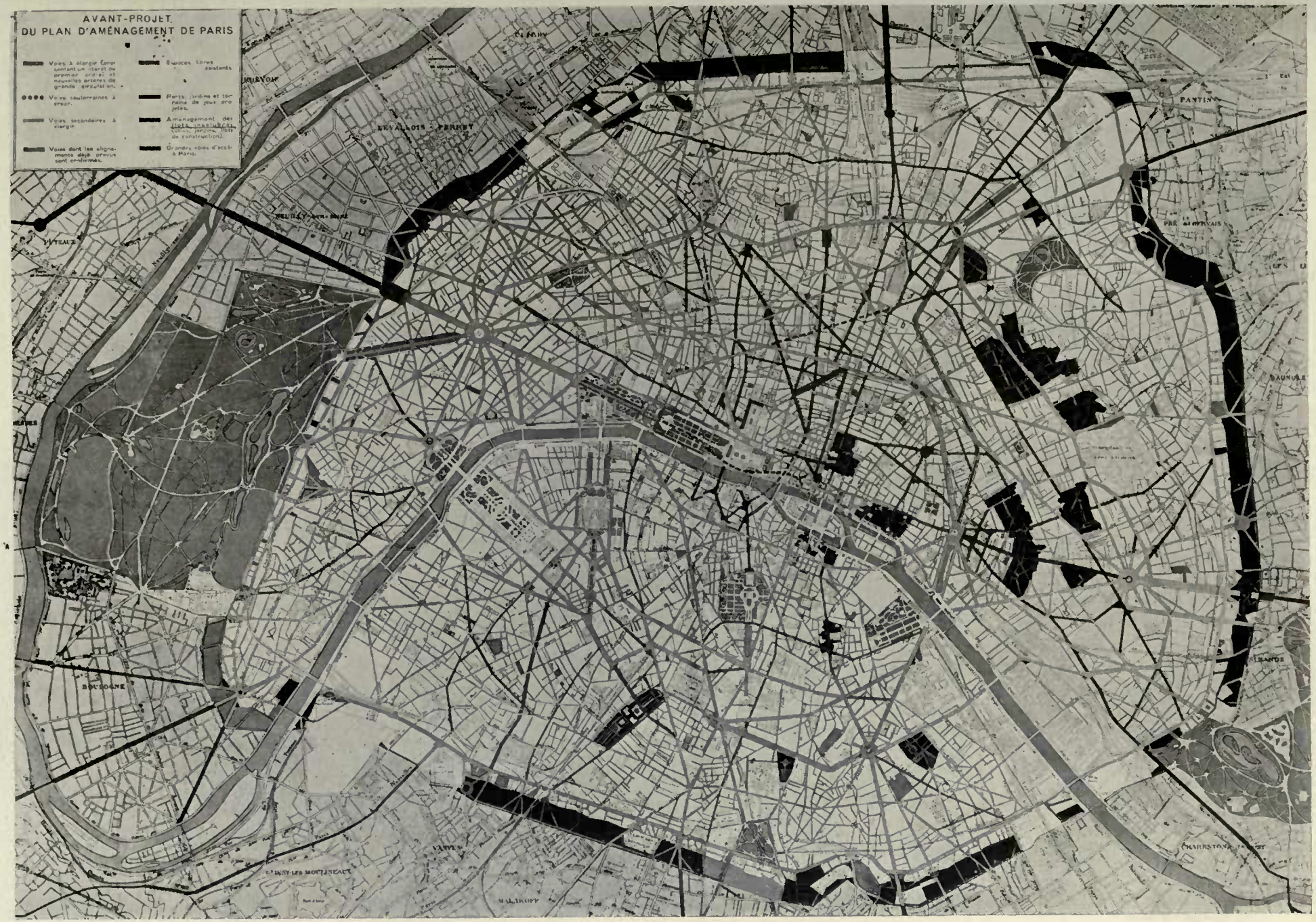



PLATE XXXIII. PLAN FOR THE REHABILITATION OF PARIS (1937), INCLUDING CLEARANCE OF "ÎLOTS INSALUBRES"*




* The dark area on the interior.

the occupancy. We shall go further into this in the chapter on "Standards of Living."

## Housing in France

### *The General Picture*

France is richly endowed by nature and has been skillfully developed. In the northern and western regions the Gulf Stream tempers the climate and assures frequent light rains which do not long obscure the sunshine; in the southeast the Mediterranean bestows similar favors; melting snows of the Alps on the east and the Pyrenees in the southwest maintain a steady flow of water in the streams, penetrating the soil for abundant crops, making possible the constant navigation of rivers, which, by means of locks and dams and a network of connecting canals, are developed into a system of navigable waterways serving practically the whole of France. A national system of forestation and erosion prevention has existed for nearly four centuries. Coal, iron, brick clay, building stone and other minerals and metals contribute toward an independent national economy. Extensive colonies complete the picture of a nation normally and for centuries so prosperous that it has taken a place in the vanguard of the culture of western civilization.

The abundant natural endowment led to colonization in the valley of the Rhone centuries before the dawn of Christianity, first by the Phoenicians, then by the Greeks, and from the time of Caesar it has made France the battlefield of envious neighboring nations. So there are few French cities which did not have their beginning as walled cities, and which have not remained walled cities almost, if not actually, until this day. The tall mediaeval half-timber houses overhanging the narrow meandering strects in the remaining old sections of the older cities—and most of them are old—tell of a crowded earlier population that feared to live beyond the protection of the walls. The very antiquity of these houses and the churches, their historic associations and architectural beauty, have tended to make old neighborhoods sacrosanct. The houses and the neighborhoods largely remain in their original use—now often the worst slums. Another alternative was followed; new residences were built beyond the congested center and in the suburbs, where the more prosperous workmen could own their own homes. That is the phase of housing on which the government first placed reliance. It was only just prior to the outbreak of World War I that there was full recognition of the importance of slum clearance and of better homes for the great mass of renters.

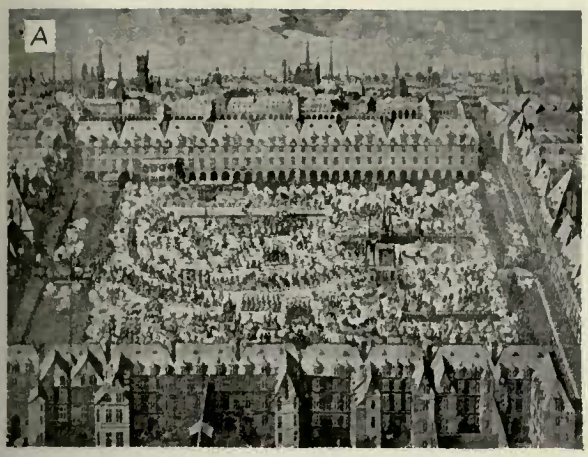
### *A Few Historical Ineidents in Housing and Rehabilitation*

Paris, the oldest of the great cities of western Europe, the heart and nerve center of France, had its origin long over two thousand years ago in a stockade, on that little island amid-stream, *la Cité*. Later it spread, first to the south bank, then to the north bank, always within city walls. As the city expanded through the centuries, new walls were built, each further out, until the 11th and the last was built in 1844, and that was leveled only after the treaty of Versailles—to be supplanted by the Maginot Line of tragic fate. During this long period the city had many experiences which gives us a historical perspective of the beginning of urban growth and housing of Paris, a perspective by which all cities may profit. Here are a few of the experiences.

The University of Paris was founded on the south bank in about 1170 A.D. (a note on one old map says in 870, by Charlemagne) and grew to be the famed and most populous center of learning in all Europe. The whole of this area on the south bank, *le Quartièr Latin*, was taken over by the students and by the teaching orders of the Church and became known as *"l'Université."* With the population mostly celibates, there was no normal increase through children—a condition which continued up to the Revolution. The merchants and the normal activities of the city were concentrated on the north bank, known as *"la Ville."* There the population and the area, starting much smaller than *l'Université*, was soon several times larger, and so it is today. *See Plate XXXIII, p. 101.* Comparing this with current experience, we note that the plans for many American cities which were made before 1930 were based on the assumption of a continuation of the previous rate of increase in population, such as took place in *la Ville*; but, as in *l'Université*, the census of 1930 showed that the population of the country as a whole had greatly slowed down in its rate of increase—one of the basic causes for our blighted areas. It is folly to plan for the population of *"la Ville,"* when your problem is *"l'Université."*

Some centuries later there was a somewhat similar incident. After the Middle Ages the city walls were used chiefly for police and customs control. Outside the walls there was scant protection from bandits and marauders—particularly for the houses distant from the gates, in the future *faubourges*. Within the walls the congestion had become so great by the middle of the 16th century that the king resorted to the expedient of opening up certain royal lands just outside the walls, in faubourg Grenelle, and of offering a grant of a "homestead" plot to any citizen of Paris who would go there and build him a home. To clinch the inducement the king issued to the homesteaders a revocation of the rule that no tradesman or craftsman could practice as a master of his trade until he had served his full period as apprentice and journeyman. So all those with the slightest experience rushed out, until there were none left to do even the emergency work of the city—a critical situation. Only the cancelling of the revocation and of the subsidy stopped the exodus. Had it not been for the backward step of revoking standards of craftsmanship, of yoking a backward movement with a forward movement, the move might well have been wholly constructive.

The first organized housing for workers within




A. 1612. Place des Voges. Built to house the silk weavers.

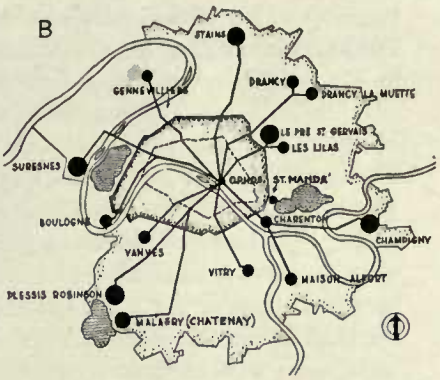
B. Location of the Cites-Jardins. Area of greatest density is within the dotted lines; heavy solid line indicates the former fortifications; outer solid lines enclose le Departement de la Seine.

C. St. Ouen housing, on site of former fortifications, and the outer "Zone of shacks" in foreground.

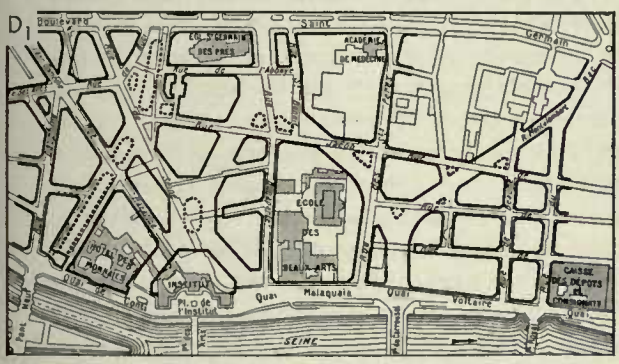
D. Redevelopment project for "Islot insalubre", St. Germain des Près.

$D_1$. Plan. $D_2$. View of model.

E. Drancy. "La Cite de la Muette". Arch'ts. E. Beaudoin et Marcel Lods.










the city was a project carried out by Henry IV early in the 17th century for establishing the silk industry in France. For the highly skilled silk workers whom, with their looms, he brought back from his conquest of Italy, he built the houses that still surround the Place des Vosges. *Plate XXXIV, A, p. 103.* The French silkworms were uncoöperative and the industry failed; but the housing was so good that it was taken over as a center of fashion—an ascending scale for old houses instead of the usual descending one. Thus we see that thoroughly well designed and well built buildings, *when secured against crowding*, may survive in good use for centuries—as witness also many buildings built in the colonial days of this country.

The next move toward better living conditions was on a larger scale. After the Revolution a "Commission des Artists" was created, in 1793, composed of engineers, architects, painters and other technicians who, with a view to bettering (in the words of the report) "the incoherence and irregularity of all communications, of their insufficiency for commerce and for circulation, the lack of squares and market places, the obstruction of the quays, the multitude of narrow and sinuous streets where air scarcely circulates and, finally the seats of corruption and insalubrity." Before the plan which they prepared could be carried out, the Republic was no more; but about every regime since then has carried out some part of their plan, particularly Housemann, under Napoleon III—though Housemann had regard chiefly for the open spaces, not for improving the "seats of insalubrity." The plan had two features: (a) the opening up of the most congested areas, and (b) the developing of new areas on the outskirts. Moral: A well-considered plan based on sound data, though held in abeyance, need not be thought of as a dead record.

The development of Paris was gradual, from the stockade on the island to the orderly and spacious summer capital of the Roman Empire, to the crowded mediaeval city dominated by *Notre Dame, St. Chapelle* and *l'Université*, to the early renaissance city of Henry IV and Francis I; then to the pompous monumental city of *la Roi Soleil*, with its great avenues for the procession of the royal cortege and for the quick movement of troops in event of popular uprisings. Napoleon and later rulers kept up that tradition of the monumental, and for the avenues and open spaces; but except for the limited influence of *la Plan des Artistes*, not until after World War I did anything happen with a promise to let the full sunlight into the homes of the masses lying within the boundaries of these open spaces. Then by the Act of 1919 a national city planning law was established, requiring all cities and towns to plan for their future growth and general improvement. Though the last city wall of Paris was condemned in 1900, it was not until 1922 that work was begun and the way opened for an expansion of the city on traditional Parisian lines.

*The Early Housing Movement in France*

Government interest in low cost housing took form in the law of 1894. Its activities were a function of the department of Commerce and Industry up to 1906, when it was placed under the control of the Minister of Public Health, for planning, construction and management. Now here is something of note. As an executive aid to the Minister there was established a High Council of Low Rent Housing, with fifty-four members made up largely of high public officials, six of whom were named in the law, fourteen appointed by the Minister to represent designated organizations, including three directors of governmental financial agencies coöperating in housing and three connected with the Registry of Land and Stamp Duties; also represented are the Senate, Chamber of Deputies, Council of State, low-rent housing associations, trade unions, the Academy of Social and Political Science, Academy of Fine Arts, Academy of Medicine, National League of Social Security, etc. The extensive executive work of the High Council was carried on by an Executive Committee of twelve. In each Department[120] a *Comité de Patronage* was provided for, as means of stimulating public interest in housing and of acting as a Departmental aid to the minister of Public Health. Each *Comité* was authorized to rule upon the local schedule of rents, sizes of rooms, etc., subject to review by the Minister. Unfortunately, they were relatively inactive, especially after 1912.[121]

The law also provided for local Housing Offices in each Department and Commune (village, town, or city) to be controlled by a board of 18 members, 6 selected by the Council, 6 by the Prefect or Mayor, 6 from private low-rent Housing Organizations. Their function was to increase the number and raise the standards of low-cost houses by encouraging existing private housing organizations and by themselves promoting new housing, improving existing housing, even managing for others and selling. Since the program included individual as well as multi-family housing, it covered about all the ground. The main source of revenue was state and local subsidies, and state loans at "reduced interest rates," which under the legislation up to 1912 was to be applied only for large families (3 children or more not over 16 years of age). The state funds available could run as high as 90 per cent of the construction costs. The reduced interest rates, 3.5 per cent prior to 1928, was for some years thereafter 2 per cent. In 1937 it was 3 per cent.

Prior to this the production of low-cost housing was solely the responsibility of such organizations as the Building and Loan Associations, Limited Dividend Associations, Coöperative Societies, etc. To them

[120] The Departments correspond geographically to our states, but are not sovereign units, and in size are comparable to the states of Rhode Island and Delaware.

[121] "Housing Agencies in France. Their Function and Organization," by the Division of Housing Studies, P.W.A., supervised by Arthur Bassin, sponsored by New York City Housing Authority, 10 E. 40th St., N. Y. C., 1938, p. 6.

were available all the financial aids advanced by the government, provided they had the approval of the municipal and departmental housing authorities. Substantial tax exemptions were also available. The chief function of these organizations was to finance and even to build low-cost housing, some solely for their own members, some for other individual owners and for multi-family dwellings. At this time two classes of dwellings were recognized, single family and multi-family. The emphasis was placed on home ownership, and private enterprise was the medium for activity. It was the peasant's ownership of his farm which made him the mainstay of the republic, and through the ownership of homes the government hoped to produce a similar loyalty in a large block of the urban population. This activity and this emphasis continued after the establishment of the Public Offices, and it is important to note that it was embodied in all subsequent legislation.

*Housing After World War I*

Just as the organization of local Public Housing Offices (under the law of 1906) was getting under way, World War I put an end to all normal activity. After the war the vast devastated area of northern France had priority in building activites—the clearing of the mangled and burnt carcasses of cities, towns, hamlets, public utilities—water, electricity, gas, transportation, communication lines, all to be built anew. The law of 1919, requiring all communities to prepare town plans, applied to Paris, as well as the devastated area, and involved housing studies which we will consider later. Though construction lagged, housing legislation did progress, inducing a limited amount of new housing.

In 1922 the law of 1894, with all subsequent amendments, was codified and is known as the Law of 1922. Under this law, state subsidies might go as high as $\frac{1}{3}$ the cost of construction for groups designed principally for large families, but in no case could an accumulation of subsidies from state and local sources exceed 85 per cent;[122] the state loan could go to 60 per cent (or, if guaranteed by the Commune or Department, to 75 per cent). The dwellings might be individual houses for home ownership, or apartments for renting, but both were to be approved as to standards by the *Comité de Patronage*, were to be within certain price limitations as to first cost of individual houses and as to rents of apartments, and were to meet certain planning requirements. Apartments had a wide range, from 1 room with a minimum area of 8 square meters and a w.c. (renting at 540 francs in the suburbs at 632 in Paris), a 3 room suite with kitchen and toilet, having a total area of 45 sq. meters (renting from 1529 to 1900 francs).

Housing legislation culminated in the Loucher Law of 1928, to which subsequent laws have been only in the nature of amendments. A specific objective was, within 5 years, to produce 200,000 "low-cost" units and 60,000 "moderate cost" units. In theory $\frac{3}{5}$ of the available funds were for private owners; $\frac{1}{3}$ was for the rural areas.[123] The law provided for, (1) direct *grants* for the purchase or construction of dwellings; (2) payment of so much of the interest on the borrowed capital as was in excess of 2 per cent (formerly $3\frac{1}{2}$). The Department and the community could further contribute each up to $1\frac{1}{2}$ per cent toward the payments of the interest and amortization of low-cost housing promoted by the Housing Office, one such contribution affecting the annuity payment by a reduction of from 3.65 to 2.15 per cent.[124] Special *subsidies* were provided for certain categories of families: (a) Families with *over 7 children*, (b) families with *war invalids*, running into large numbers, (c) families with *occupational invalids*. *Civil Service employees* with small incomes were also favored. The amount of subsidy for large families was in proportion to the number of children; for pensionaires and invalids in proportion to percentage of invalidity. Subsidies ranged from 500 to 15,000 francs, 2500 being added for each additional child beyond the third, and for every additional invalidity over 60 per cent, but not for both reasons together. The legal age of children was advanced from 16 to 18 years. The rents against which the subsidies applied varied from 545 francs (as of 1930) for one room and kitchen of the cheaper type, to 4,585 francs for five rooms and kitchen of the "improved type."[125] *These subsidies were granted only when the occupant of the dwelling was to become the owner.* It is also important to note that those who could enjoy subsidies were those who had made some special contribution to the nation, either impaired in service or begetting and rearing a new crop of citizens.[126] The law was extended several times and was still in force in December, 1937. The cost for the completion of the program has been roughly estimated at a sum equivalent to about $400,000,000.

The accomplishments up to 1935 are graphically indicated in Table XII. In 1937 the number of Housing Agencies was 1600, of which 300 were municipal and departmental housing authorities, 1000 corporations or coöperatives, 300 Building Trusts. The distribution of government loans shows considerable activity among private agencies (items 2, 3, 5 in the table), to which the loans were nearly half as much as those to the public agencies.

It is interesting to note the range of the housing in Table XII, p. 106. The sanitoria would no doubt include the community of semi-detached homes for those in impaired physical condition located at Perigeaux and Brive—built with government aid by the

[122] "Loyers pour les Classes Peu Fortunées." International Town Planning and Housing Conference, Paris, 1937; Section on France by Pierre Barde, International Housing Association, Frankfort.

[123] "Housing Agencies in France," op. cit., pp. 41–42.

[124] "Loyer pour les Classes Peu Fortunées," op. cit., p. 278.

[125] "Financement de la Construction d'Habitation des Classes Peu Aisées," op. cit., p. 87.

[126] "Housing Agencies in France," op. cit., p. 6.

National Association of Consumptive and Surgical Cases.[127] But apparently it does not include the homes built by employers for employees, though they come under the surveillance of the High Council for Housing—"57,000 dwellings built by the mining interests; 124,000 by the railway companies; and nearly 185,000 by scattered industries"[128]—a total of 366,000! *Out of more than 2800 organizations employing 500 or more, 57 per cent had built employees' houses, and another 9 per cent had given financial assistance for employee-owned homes.*

The need for better housing, however, was great. As in other countries the cities of France were increasing in population at the expense of the rural areas—excepting Lille and Bordeaux among the larger cities, which were decreasing. The population as a whole was increasing (39,240,000 in 1921, 41,835,000 in 1931); the birth rate was making better gains than in neighboring countries (due no doubt to government subsidies in other fields than housing) but the infant mortality rate was not decreasing as fast as in those

TABLE XII. GOVERNMENT LOANS TO LOW-COST HOUSING
(as of December 31, 1935)*

| | Number of Projects | Million Francs |
|---|---|---|
| 1. Housing Authorities | 1,343 | 3,593 |
| 2. Stock Companies | 831 | 1,171 |
| 3. Co-operatives | 1,279 | 535 |
| 4. Cities | 33 | 124 |
| 5. Endowed Building Trusts | 27 | 66 |
| 6. Dispensaries and Sanitoria | 43 | 63 |
| | 3,556 | 5,552 |

* Data is from "Financement de la Construction d'Habitation des Classes Peu Aisées," op. cit., p. 88.

countries. Tuberculosis was taking a large toll in the crowded areas of Paris, seventeen of which after a census made in 1917, were defined as "*îlots insalubres*," and marked for slum clearance, whereas before the war there had been but six. *See Plates XXXIII, p. 101, XXXIV, C and D, p. 103.* This increase may in part be attributed to the harsh conditions of the war—malnutrition and strain—but obviously the housing conditions must also be considered as major contributing factors—overcrowding, little sunlight penetrating the narrow streets and courts, inadequate sanitary facilities, made worse through less than normal upkeep. The population in the *îlots insalubres* averaged 150 per acre and ran as high as 405 in one area. Prior to the war an appropriation was made for the demolition of the worst of the housing, but the work was not undertaken until several years after the war, when an acute epidemic in one area impelled immediate action. Had state subsidies been available for *all families* in congested urban areas, we might have expected results comparable with the results of housing subsidies for large families.

Early in 1932, after the Loucher Law had run about one-half of its five year course, the High Council reported the construction of between 9,000 and 10,000 "improved" low-cost units and 180,000 "low-cost" units, toward the goal of 200,000 for all types of low cost units.[129] We have no figures on the "moderate" cost units. The estimated need was 800,000, of which 150,000 were in Paris and of which latter only 50,000 had been built. All this is not a large showing in itself; but in judging this post-war period we must bear in mind the vast program of rehabilitating the devastated area, the impoverished condition of the nation both as to man power and as to material and financial resources, to which was added the final failure of German reparation payments. Because of all these conditions, the depression in particular, prices sky-rocketed and were the chief obstacle in carrying out the aims of the Law of 1928. Starting at three times pre-war prices in 1919, after 1925 they were never less than six times pre-war prices, and land was held at speculative prices. To place a ceiling over these prices, laws were passed, which in their earlier form were nullified by faulty methods made scandalous in their execution,[130] but remedied in 1931 by a supplementary law. Unfortunately one effect of legislation for rent control had been to widen the gap to be bridged between slum housing and good housing.

### *The Later Housing In and About Paris*

The walls of Paris were about twenty-one miles long and were about a hundred or more yards wide, including the adjoining moats and slopes forming part of the fortification. Immediately beyond them was the "zone," some two hundred and fifty more yards wide, in private ownership, undeveloped as to streets and public services, but at many places crowded with shacks—an anomalous condition for a great capital. *See Plate XXXIV C, p. 103.* As far back as 1900 the fortifications had been condemned as useless for military defense. From then on the city planners and housers had been dreaming of reserving the entire area for a circumferential park, in which sunlit housing groups should be judiciously placed. To acquire the privately owned land and build the thoroughfares with all the utilities was an undertaking of the first magnitude. In 1922 the work of razing the walls began, in 1924 clearance of both fortifications and zones was required by law, in 1930 a new law set 1975 as the date for the total achievement.[131] This distant date is characteristic of French long-range city planning.

[127] "Some essential Facts on Government-Aided Housing in Western Europe," by Stella K. Margold, under N. H. Engle, Asst. Director U. I. Department of Commerce, Gov't Printing Office, Washington, 1936, p. 12.

[128] "Housing Agencies in France," op. cit., p. 36.

[129] *Ibid.*, op. cit., p. 46.

[130] "Europe Re-housed," op. cit., pp. 223–224. Also "Housing Agencies in France," op. cit., p. 19.

[131] "Le Problème de la Zone," by Pierre Doumerc, Directeur du Plan de Paris à La Prefecture de la Seine, in "Paris 1937," *numero special de l'Architecture d'Aujourd'Hui*, June, 1937, Rue Bartholdi, Boulogne (Seine).

Families in the clearance areas and in the *îlots insalubres*, who had looked forward to a place in the proposed sunlit housing were doomed to disappointment. In 1930 the municipality agreed with private housing organizations for the lease of the necessary land for the erection of 20,000 apartments, to be financed by a public loan, with a proviso that 10,000 apartments should be for manual workers and 10,000 for white-collar workers, and that the rents should be within the reach of each group. Actually the terms of the agreement were not exacted by the municipality; 85 per cent of the cheaper apartments were rented for more than the stipulated figure. The land was so closely built upon and the buildings of such height (eight stories), so closely grouped and so nearly enclosed at the periphery of the blocks that the interior courts averaged deeper than their width, thus shutting out direct sunlight from many of the rooms in about half the stories; and the circulation of air was limited. The materials and finish of both the exterior and interior were far in excess of that customary in low-cost housing, yet hot water was not provided, nor were bath tubs or showers, which raises a question which we will discuss a little later. These standards were more in the spirit of the speculative building than those of an informed and responsible housing authority. It suggests that politicians rather than statesmen held the reins, and were yielding to "pressure groups" of speculative interests.[132]

The *îlots insalubres*, however, were scheduled for clearance. On the same sites, open, airy, housing groups were *planned* by the municipal housing authority. *See Plate XXXIII.* To take the surplus of these and other areas, where conditions were possibly somewhat less acute, a series of *cité-jardins* were planned, some near existing employment centers, some remote. This phase of housing for the Parisians brings us back into the sunlight.

The system of *cité-jardins* was planned and carried out by the Housing Office of the Department of the Seine, which includes Paris. By 1937 the population of the Department was close to 6,000,000, distributed, as indicated by the 1931 census, in the following proportions: Paris 2,887,000; the remainder of the Department 2,087,000 the greater portion of whom were concentrated in a chain of industrial cities and towns immediately surrounding and many of them continuous with the parent city. Many of these centers of population lay within the city boundary as extended in 1935; the others are within the "outer area" of Paris, as defined at the same time. In the industrial centers, the "Red Belt," over-crowding and the mortality rate were comparable to those in the heart of Paris. Most of the area of the Department is beautiful open, rolling country.

This situation was both a challenge and an opportunity for a large scale housing program of the highest type. The Housing Office of the Department, organized in 1912, was given powers approximating those of a city planning board, but for reasons previously noted it did not come into notable activity until after the war. The effect of the law of 1928 was not immediate. The final achievement began in 1935 with laying out of some sixteen large housing groups, mostly of the type of the *cité-jardins*, and with the erection of the initial fifteen thousand seven hundred dwelling units, at an expense of one billion one hundred fifteen million francs.[133] *See Plate XXXIV, B, p. 103.*

We hasten to explain that the term *cité-jardins* does not mean a "garden city," but rather a garden village, often less than a village, designed to house the population working in the congested urban area—not a self-contained and economic unit. M. Henri Sellier, who was largely responsible for the undertaking, after disavowing any intention of following Howard's English pattern, states, "... the object is clearly limited and clearly defined and consists of building the actual groups to assure the relief of the congestion of the city of Paris and its suburbs, to serve as an example to subdividers who for the last thirty years have literally sabotaged the outskirts, and, ever keeping in mind the normal economic and spiritual urban life, to demonstrate how it is possible to assure to a population engaged in manual and intellectual pursuits a home presenting the maximum of material comfort and hygienic conditions in such a way as to eliminate the inconveniences of the large cities, and [to demonstrate] ways of achieving aesthetic results in startling contrast to the hideousness of the formulas previously practiced.... Our job obviously is to provide homes for millions who contract, in the slums of our suburbs and outskirts, the germs of every malady, social, physical and moral.... The groups should constitute one of the essential elements of the city of greater Paris."[134] A fine statement of objectives for any metropolitan housing authority.

The Housing Office had the foresight to acquire large tracts of land, 494 acres immediately after the war, when prices had fallen to almost unbelievably low levels; later, to these were added 412 acres, largely farm land closer to the city. The land was so distributed as to afford sites for eleven *cité-jardins*, distributed on all sides of the city, some in the open country, some on the edges of existing suburbs. Some of the more distant ones were beyond established trolley, bus or subway lines. Subways involved great expense and the trolley and bus companies were not coöperative; the municipality did not see its way to financing the subways which had been planned. The plans for establishing the lines

[132] Elizabeth Denby, op. cit., pp. 226–228; also "Housing Agencies of France," op. cit., p. 18.

[133] It is difficult to translate this figure into dollars because of the comparative ratio of building costs. Measured by exchange rates it would mean about $44,000,000, but because of the purchasing value of the franc that far understates the true comparison.

[134] "L'Oeuvre de l'Office Public d'Habitations à Bon Marché du Département de la Seine," par Henri Sellier, Administrateur-Délégué de l'Office; Conseiller General de la Seine; Ministre de la Santé Public. In "Paris 1937," op. cit., p. 44.

utterly failed in the case of Drancy la Muette, resulting in vacating the project; lines to Châtenay-Malabry and Plessis-Robinson had not been established in 1937.

Of the total area of each *cité-jardin* about 30 per cent was to be held as open space, never to be built upon—actually it has varied from 67 per cent to 86 per cent. The value of this open land increased so greatly that by 1938 it was nearly 1¼ times the purchase price of all the land.[135] It was this that led to the buying up of more acreage, close to the city but in areas where as yet public transportation lines had not caused a rise in prices. If purchased in excess of actual needs, the re-sale or leasing of the extra land should aid materially in the financing of any housing project. *See p. 165, 166.*

*Trends in Design and Construction*

In the designing of the *cité-jardins* the English garden villages strongly influenced the earlier work—low individual houses and row houses, with gardens; but as time went on the trend was away from the principle of emphasizing the individual home, with its private garden plot. The trend was toward multi-family houses under one roof around large common spaces. In an intermediate phase, for aesthetic reasons, varying heights in the apartment houses were introduced,—in two instances, tower apartments of 10 and 15 stories. *Plates XXXIV E, p. 103, XXXV, p. 109.* The trend culminated in projects composed of groups of four and five story apartment buildings, pretty well standardized in each group, arranged in relatively straight lines around the perimeter of a common open space and with a relatively unbroken skyline. The change came about not from choice but from the rigorous exactions of sky-rocketing building costs. The uniform four story multi-family buildings made possible more compact site plans, hence less extensive systems of roads and public utilities to build and to maintain; also greatly reduced land coverage, and land costs. Experience also demonstrated that, under the conditions then prevailing, building costs per family unit were less in the multi-family than in row houses and other smaller units. Even with the four story buildings it was found that by maintaining generous open spaces, an adequate movement of air, light and outlook for all could be assured.[136] The earlier rule (that the width of the street should be twice the height of the building) is far from realized at Charenton, typical of the later type of design. *Plate XXXVI, C, p. 112.*

Changes in structural methods paralleled the changes in design. In the earlier buildings use was made of new materials, particularly in prefabricated units; but as they were found to have no advantage either structurally or in first cost, they gave way to the use of more traditional materials. Instead of double walls built with an inner and outer prefabricated unit (supported on a concrete frame), in the latest phase of the trend two light curtain walls were used, the inner one the traditional lath and plaster, the outer one of brick, or of porous concrete or even a kind of adobe, finished with a hard impermeable weathering surface. For this finish various types of stucco were commonly used, often showing an aggregate or a dash of pebbles or marble in knowingly selected colors, or again the texture was gotten by scratching or combing the stucco, vertically, horizontally, or diagonally (similar to the "cuts" in stonework), followed by two coats of silicate paint. All of these methods, done with the skilled craftsmanship for which the French are famous yielded excellent results.

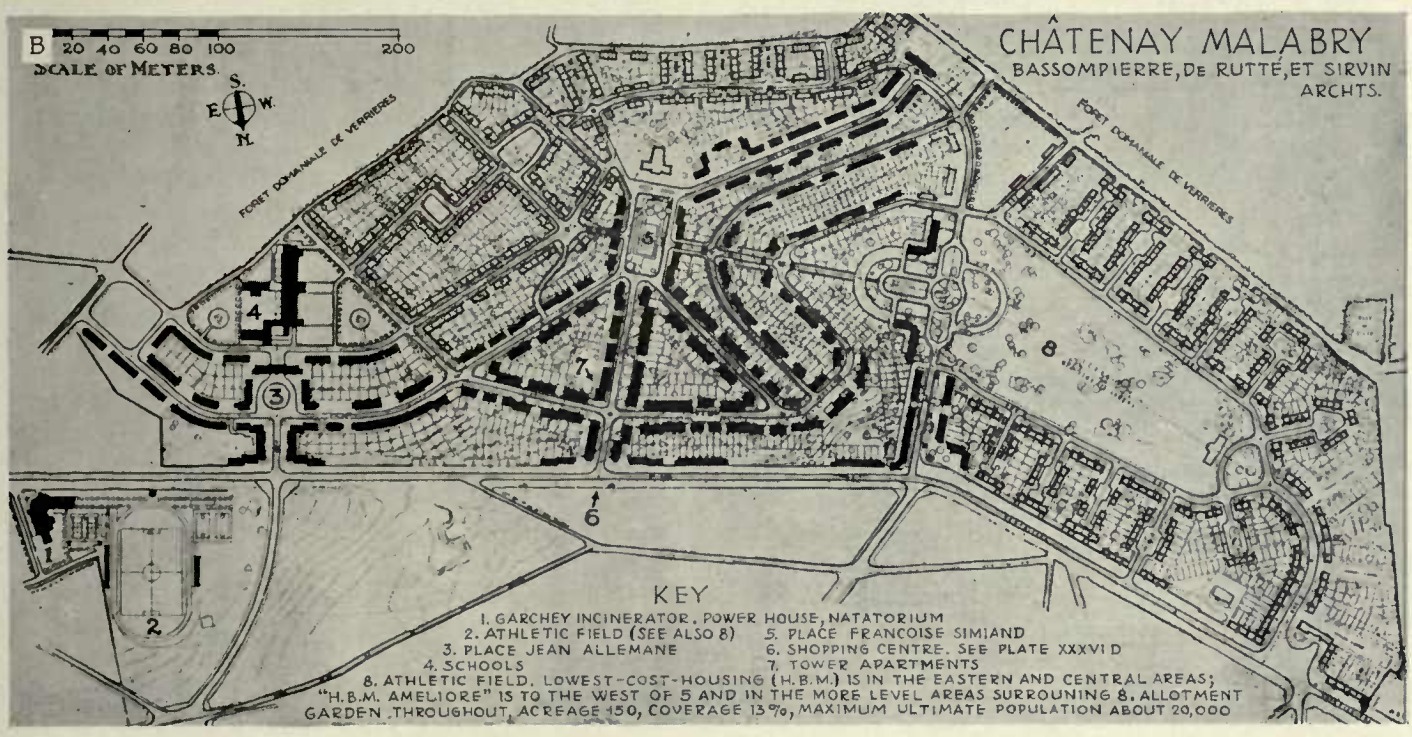
At Châtenay-Malabry, in the intermediate phase, there is no attempt at imitation of British or other precedents. The design of the buildings is spontaneous, simple and crisp—French design at its best; yet there is observance of the fundamental principles of garden-village planning as developed by the English—the variety that comes with following the contours of a rolling site, and the variety achieved by the juxtaposition of buildings of different heights and architectural treatment. It is definitely a rural project—a garden community for those who seek relief from city life. The groups designed in the last phase as typified by Charenton, are definitely for those to whom it is acceptable to be a unit in a mass way of living.

There is one feature in these groups by which we in the United States can well profit. In each *cité-jardin* provision is made for both "low-cost" units and "improved" low cost units, of which more detail a little later. The families occupying the "low cost" units may include laborers from the slums; those occupying the "improved" units may include the so-called white collar worker, intellectuals and artists. In addition to the two classes of apartments, there are row houses arranged in three separate groups. In a community as large as Châtenay-Malabry, with an ultimate population of 20,000, such a diversified population becomes important. To complete the picture at Châtenay-Malabry, there are allotment gardens for those who wish them, an educational center facing one *place*, stores and cinema facing another. There is a delightfully appointed natatorium at the disposal plant of the Garchey system, which we will describe later.

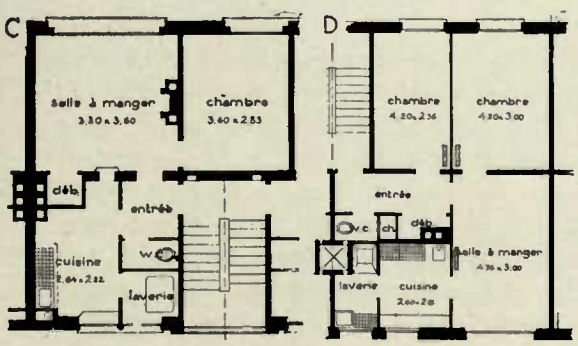
In the housing projects at Suresnes, *Departement de la Seine*, with a population of some 27,000 (the home town of M. Sellier, who has directed the Housing Office in this Department since its inception, and who in 1937, as National Minister of Health, directed the national program), there they went one step further in diversification, as in Holland, and "... for families ... who have revealed a doubtful social education and who have need to be observed and improved before being introduced into normal surroundings, there have been constructed, at the end of the *cité*, units conceived in such a manner as to avoid

[135] Elizabeth Denby, op. cit., pp. 231–232.

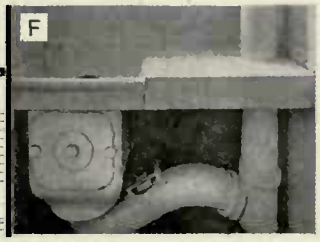
[136] Henri Sellier, op. cit.


A. Skyline, taken from roof about 50 M. west of 5 on B, looking N. E.
B. Site Plan.
C, D. Unit plan in "H.B.M." C. Laverie, or washroom, with shower, w.c. venting on laverie. D. Laverie with shower and basin; w.c. venting on shaft; coal heater at end of sink.
E. Unit plans of "H.B.M. ameliore"; bathroom and secchoir.




F. Garchey garbage remover.
G. Hood over unit heater.




the heavy expenses of upkeep which so fatally follow the occupation of dwellings by such families, [units] which they will maintain despite themselves, in a state satisfactorily hygienic.[137] The houses are similar in principle to those in Amsterdam, previously described.

As to the distinction between the three classes of dwellings: (A) the "low cost dwellings" obviously were for people of low incomes; the law set certain maxima of rents, which might allow as much as 20 per cent more for single than for multi-family houses, and more for houses within 20 kilometers from the center of Paris than for those further out; they were required to be healthful; the minimum size for rooms, the net costs, basic economic rents and income eligibility of families were ordinarily determined by regulations set up by the Mayor and certified to by the *Comité de Patronage* after approval by the Minister of Health,—a system which takes cognizance of local conditions and traditions.[138]

(B) The "moderate cost dwellings" were intended for people of moderate means who were affected by a lack of houses; the rent was to be not more than 3.6 times the maximum set by law for the low cost houses; each "habitable" room was to have no less than 9 square meters (about 97 feet); the total gross area between walls for two rooms, kitchen and water closet, was to be not less than 47 square meters (503 feet), and for each extra room an additional 12 square meters was to be added to the gross area. (C) The "improved dwellings" first provided for under the Bonneval Act of 1930, required for each "habitable" room a minimum of 12 square meters (129 feet);[139] besides being more spacious, these houses have better interior finish. The range of rents within any group is also affected by the varying interest rates on loans and varying subsidies. Thus on the government loans for the "low cost" units, the interest was at one time 2 per cent and the loans might have gone up to 90 per cent of the cost; on the "improved" units the charge was 3 per cent. *For typical plans see Plate XXXV, C, D, E, p. 109.*

*Standards of Utilities*

A bathroom, with tub and perhaps a shower, is provided in the "improved" units only. In some cases the tub is but 42 inches long, said to be adequate for a large person—sitz tubs were used in some groups, in others a deep shower receptor. In the "low-cost" units, the bathroom as such, is omitted and in its place is a *Salle d'eau*, a small room with concrete floor and floor drain, and a faucet threaded for attachment of a portable shower (which the tenant supplies or leases) and for laundry equipment. Off this is the drying porch (*sechoir*). In some of the plans this compact arrangement of plumbing facilities led to placing the toilet in an interior compartment, requiring a vent shaft (with intake close to the ceiling) which is large enough to serve also as the duct for all vertical utility lines—with access panels. This raises the question of possible spread of communicable diseases through the shaft—a matter which M. Sellier (Minister of Public Health) assures us has received careful attention. With a forced draught and vigilance to see that the intakes are kept open, there can be little doubt it would be safe. The system is in use in all modern hotels, in many high class apartments and costly private houses in the United States, but the validity of its use does depend upon adequate surveillance.

This arrangement has another advantage besides economy of space and installation. The family washing, often "dirty," as M. Seiller puts it, is "kept as far as possible from the preparation of food." So also is the splashing and dripping and the attendant excessive humidity so conducive to the discomfort of the housewife and to the spread of communicable colds and more serious diseases of the respiratory system. To add further to the comfort of the kitchen there is a hood over the range, to remove the odors and vapors of cooking. The bathroom is placed off the kitchen in order to concentrate the plumbing and to avoid providing space for an extra passage. The French have no traditions of prudery and their sensibilities are not shocked by this location of bath and toilet, any more than are American sensibilities by the display of near-nude figures on our bathing beaches, which to many Europeans would be highly exciting, if not shocking.

Another feature which simplifies planning is that only one closet is required. Instead wardrobes are used, as a result of an ancient law placing a tax on all doors and windows—despite the fact that there is a tax exemption on doors and windows in low-cost housing. This may be a good example of that lag of tradition against which we must constantly be on guard to sift the vital from the fossilized; or is it an indication of a preference for the greater flexibility in planning made possible by omitting the closets and providing extra floor space for a wardrobe?

Central heating for low-cost housing in France seldom means heat supplied from a central plant to all family units or even to all rooms within the units served. When a common central plant does exist, it is customary to make a service charge for each radiator. Central heat is more apt to mean a central heater located in the kitchen, usually supplemented by coal-burning fire places. With this arrangement there is a small horizontal hot water supply tank under the range hood, and a specially devised coal closet opening off the entry. This of course implies bringing in coal and taking out ashes by hand. But, while the winters in the region of Paris are short and seldom severely cold, they are often very damp. The lack of heat leads to tightly closed windows in cold weather, which, in the old houses of massive masonry walls saturated with moisture, may have a bearing on the prevalence of

[137] "Suresnes, Etude sur l'Evolution et l'amenagement d'une Ville de Banlieu," special number of Urbanism, Jan., 1925, rue de Sevigne, Paris, p. 25.

[138] "Some Essential Facts, . . ." op. cit., p. 12.

[139] "Housing Agencies in France," op. cit., p. 6.

tuberculosis in the older houses. The ultimate goal of the Housing Office is central heating, as we in the United States know it.

On the other hand the French are far ahead of us and all other countries in that most irritating problem of disposal of garbage and waste, with its unsanitary potentialities. In a number of the large housing groups there is installed a system whereby garbage or waste, including cans, is disposed of through a large opening in the bottom of the sink. From there it is pneumatically forced through a system of large ducts to a central plant, where the combustible material is dried out and used as fuel for heating the hot water supply and the metal is reclaimed. The system which I saw in use was the Garchey, but there are other similar systems. *See Plate XXXV, F, p. 109* . . . . Gas, electricity and often hot water, are part of the normal equipment, but like the radiators, the hot water may be closely rationed, with a charge for any excess used—implying the installation of meters.

*France in General*

If you would get a vision of how, in the future, housing will be integrated into a complete program of social betterment, visit Suresnes. Situated at the foot of the slope of Mount Valerien, which overlooks Paris some four miles to the east, having an area of but eight hundred thirty acres, with a population of but 4000 some seventy-five years ago, it is today an industrial city with over 27,000 inhabitants. In the center of the city is a large public health building, with model clinical appointments, where all the adult population is encouraged, if not required, to come for registration, examination, treatment and frequent check-ups. Nearby is a modern day nursery for the children of working mothers. In a system of modern school buildings, distributed in the light of a comprehensive city plan, there are unusual facilities for physical development; here the health of all the children receives the same attention as that of their parents. On a rough slope of Mt. Valerien, an outdoor school for children with physical handicaps was built, with huge, hinged and rolling glass doors (veritable walls) on the south side of the building, so that the children in class can be always in the sun. The doors open onto a series of small playground areas which have been skillfully landscaped to take advantage of the broken topography—miniature ravines, pools, flowering shade trees and shrubs. *See Plate XXXVI, B, p. 112.* Finally, reasonably convenient to the center of town is the *cité-jardin*, for a wide income range of the population. The goal of the entire program is the making of better citizens, physically and mentally, through intelligent foresight and the provision of a wholesome environment—another monument to M. Sellier, organizer of the *cité-jardins*.

If the accomplishments of low cost housing in France are not as great as in some other countries, measured quantitatively, we must bear in mind the tremendous handicaps arising out of a world war in which France took the brunt of the shock for all the allied nations, handicaps culminating in the failure of German reparations, on which was pyramided the depression. Despite the fact that at times mercenary interest appears to have influenced public officials to the detriment of the public interests, the accomplishments have been significant. The wide range of housing activities shows great scope of vision in the improvement of the home environment for many diversified groups. *See Plate XXXVI, p. 112.*

## Housing in Russia

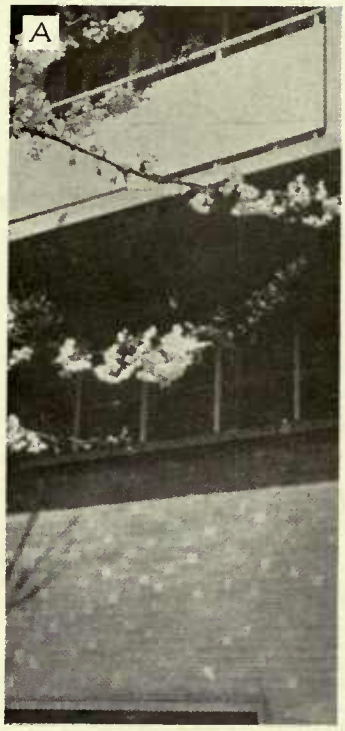
*The General Picture*

The vastness of Russia, from the Arctic to the Caspian Sea, from the Baltic to the Pacific, and within this area the variety in climate, topography and the natural resources, are all well known. What are not so well known are certain characteristics, racial and historical, which differentiate Russia from Western Europe. The Russians have a vigor and hardihood which seems almost primitive—yet both peasant and the former nobility have ever been credited with being contemplative, philosophical, and also highly imaginative. Russian writers have long emphasized these traits. Tolstoy, in "War and Peace," writing of a period more than a century passed, emphasized also the intense patriotism of the peasants as well as the ruling classes. But most significant is the fact that the culture and economy of the masses, up until the revolution of 1917, were very close to the Middle Ages. As late as 1928, of the total population, 80 per cent were on the soil, tilling and harvesting their crops by hand with antique models of sickles, scythes and hooked ploughs.[140] Among the nobility there was great wealth and considerable culture; Russian scholars have and still do rank high. It is out of this medieval background of contrasting civilizations that the revolution evolved and against this background that their progress, including that in housing, must be measured.

As is characteristic of medieval civilization, between the housing of the prosperous and the housing of the greater number with small incomes there were great contrasts. A report of the Moscow City Council, in 1918, found, "17 per cent of the population living under inhumane conditions," including living in damp and ill-ventilated basement space (suggestive of conditions in New York only a few decades earlier), and in wooden shacks in the suburbs (suggesting the "Zone" in Paris).[141] Hans Blumfield reports that prior to 1912 nearly 62 per cent of the entire population of Moscow were living more than two to a room, which was cut to about 37 per cent when municipal ownership became effective in 1918, and when all dwellings were pooled on a basis of 97 square feet per person. With the rapid increase of the population, that figure was gradually reduced—finally to 46 square feet. "Half

[140] Hewlett Johnson, Archbishop of Canterbury, in "The Soviet Power," International Publishers, New York, 1941, p. 11.

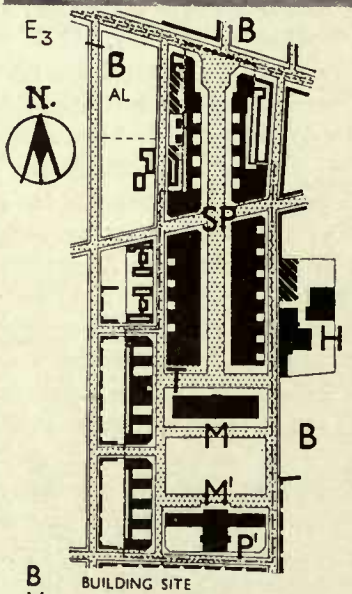
[141] H. Johnson, op. cit., p. 11.












B BUILDING SITE
H HEATING PLANT
M TOWN HALL INCLUDING LIBRARY
M THEATRE CINEMA PUBLIC HALL
P' GARDEN
SP SHOPS
T TELEPHONE EXCHANGE
AL ALLOTMENTS

A. Stucco texture and balcony detail—Chatenay-Malabry.

B. Texture of precast concrete used in some low-cost housing. Example from Open-Air School at Suresnes.

C. Balconies—Charenton.

D. Stores on arcade—Chatenay-Malabry, at 6, Plate XXXV, B.

E. 1931–34. Lyons. Villeurban. Acres 12; coverage 39%; density 383. Arch't. M. Lereaux.

of the existing houses have been built since then."[142] In my brief visit in Leningrad and Moscow in 1937, what I saw of the slums was mostly in obsolete and rundown structures, many of them designed for living on such an elaborate scale that they were not adaptable for families without servants.

*Housing a Subdivision of Municipal and National Planning*

Today housing in Russia is unique in that it is not a "thing unto itself," but, both in conception and in execution, is an organic part of the social and economic body—housing, health, recreation, education, industry, transportation, communication—each is considered in relation to the others.

Housing is a subdivision of municipal planning, of which the broad policies emanate from a national planning commission, Giprogor, which plans all. In operation it begins a step further back. A national budgetary commission, Gosplan, determines the national economy and the distribution of annual expenditures, based on tentative plans and budgetary requisitions from all governmental activities within the entire Soviet Union. These expenditures the planning commission must coördinate into a master plan. Giprogor's planning is so extensive that it maintains a school of planning to supply its own technicians—just as the general staff of our army has its War College. The municipal planning group, on the other hand, have learned that in the development and execution of their plans they can best use the local private talent.

To illustrate the relation of housing to national planning: In developing the national resources of Siberia, a new city was conceived as a need in the rich ore country of the Ural Mountains, and as the rapid industrialization of Russia was also part of the master plan, the new city must be built *presto*. In four years Magnitogorak had a population of 171,000 people. To house so many in so short a time there were built semi-temporary, prefabricated three-story houses, constructed of wood panel sections to be applied on a wood frame fabricated at the mills in the lumber camps. During this same period over a score of other new cities with populations over 20,000 came into being, all needing this same kind of housing, all fabricated by the same standardized House-building Union, under Giprogor, through the municipal planning boards.[143]

At the start of the Soviet regime, the consideration of permanent housing policies was delayed by the comprehensive plan for the development of natural resources and industries throughout Russia and Siberia. Most housing was put where needed in connection with major construction work and was influenced by the emergency, just as with our own war housing. At first housing standards were confused and altogether inadequate, particularly as to sanitary facilities. In 1935 new standards were established, resulting in spacious accommodations with all conveniences—rooms over-large, ceiling over-high—about ten feet, even in the cold climate of Moscow.

In my brief stay in Russia I did not discover in their housing anything sufficiently unique to warrant special consideration; but I did not get into the new industrial cities where the greatest housing activity has taken place—certainly our illustrations indicate interesting exteriors and at least one very knowing site-plan.[144]

*Author's Impression of Russian Planning in 1937*

Here is the general picture which the author got when visiting Leningrad and Moscow in 1937: "Strange to say it is in Russia that I found the standards of the unit of housing most like those in America—kitchen, dining room, living room, bedroom, bathroom, with all the accessories, including central heat, and a built-in radio loudspeaker in the hall. All the housing which I saw in Leningrad and Moscow was in apartment blocks. *See Plate XXXVII, $A_1$, $A_2$, p. 114.* At least in theory, blue jeans, white collars and the cane-carrying professionals all live under the same roof, the government taking an average of about 15 per cent of the earnings of each for rent.[145] The professional man can have one more room than can the others—for an office or studio. In reality the housing near the outlying industrial centers is not as attractive (at least as I saw it from the street) as is that more centrally located. Many of the designs are conceived in unusual vigor, some so large in scale and drab in color as to be lacking in any domestic quality. In a number of the building trades there seems to be little tradition for fine craftsmanship. Is this because the unions failed to train new men in proper proportion to the rapidly expanding building program? In Moscow one twelve-story project covers a city block and contains restaurant, cinema, and day nursery, but no room and no need for an outdoor playground. Playgrounds are being made on a scale exceeding anything we know in America or Western Europe—in "centers of recreation and culture," where aside from the usual outdoor sports, there are cinemas, professional theatres, amateur theatres, lecture halls and innumerable booths where one can hear informal talks and seek information on a great diversity of subjects, including the various vocations. At one such booth I learned that the requirements for the architectural schools are about the

[142] "Regional and City Planning in the Soviet Union," Task, Issue No. 3, pp. 33–53, abstracted by Division of Urban Studies, NHA, Dec. 1, 1943.

[143] Data concerning these matters are found in "Housing Agencies in the Soviet Union" (with extensive bibliography). U.S.P.W.A. project #465, 97-3-18, Arthur Bassin, supervisor, N. Y. Housing Authority, 10 E. 40th St., 1938.

[144] For some years prior to the outbreak of World-War II, it was extremely difficult to get plans or any other documents. They did not exist for general distribution—for the very good reasons which became obvious in 1939.

[145] This figure I got from officials on the ground. Mr. Bassin (op. cit) tells us that for the average worker the base rent is 4.7 per cent of income with various extras and sometimes deductions.

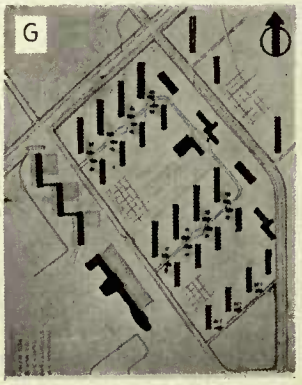
Note: (1) All types of "workers" may live under the same roof.
(2) The general standard for the home environment is high.



A. Leningrad . Latitude 60°. A.1. Apartments in non-industrial area, including apartments for professionals. A.2. In an industrial area.
B. Kuibychev. Latitude 52°.
C. Chelyabinsk. Latitude 53°. For tractor workers.
D. Ukrainia. Latitude 47°. D1. Krivoi-Rog, for Metal workers. D2. Zaporozhie, a new city.




E. Batum. Latitude 43°. Workers houses.
F. Stalinbad. Latitude 40°. A new city of 60,000 people.
G. Manief. Uniform orientation without monotony.




same as ours, except possibly for greater requirements in languages—the use of two foreign languages is required. There are pavilions where the children can gather on rainy days and play billiards or chess—the latter seems to be the national indoor sport from grade school on. One afternoon, in a fifteen minute ride on the river, I counted twenty shells, from singles to eight oars, about a third of the rowers being young women.

"The Moscow population, said to be about six million in 1937 is increasing 50 per cent per annum. The present program calls for the razing of 60 per cent of the residences in the city (including convents and monasteries) and replacing them with new buildings. I spent many hours wandering about at will through the slums and found them about as in most cities of several million people. Satellite industrial centers are being developed and here a large part of the workers will be housed. *See Plate XXXVII, C, D,* and *E, p. 114.* This is but part of a stupendous program of city planning and regional planning which is being pushed twenty-four hours a day in three shifts—a great new canal of strategic importance, a new harbor, deepening the river, walling its banks and raising and greatly enlarging the nine bridges so that ships of some size can pass through, so that ultimately the Black Sea, the Caspian, the Gulf of Finland and the Arctic Ocean will be connected in one great waterway via rivers having their heads in the Moscow region;[146] radial and circumferential boulevards and subway systems; squares and parks; one hundred and thirty-two junior high schools, each for eight hundred and eighty students, being built in Moscow during the summer vacation; an extensive group of government buildings approximate to the colossal new "Parliament" building, already under way. Enough has been done to make one feel that Roman Emperors, Louis XIV, and Napoleon III were "makers of little plans."

"A vast peasant population is marching out of the Middle Ages and for them a vast country is being transformed by industrialism, by a comprehensive system of education for young and old, by all the advances and amenities of western Europe, including housing. In the very complete new apartments, will the mass of the people soon be living more wholesomely than the more simply housed working classes of Holland and England? If so, will it be because of the housing standards, or because of the social training which they will have received?"[147]

[146] "Richland, Poorland," Stuart Chase, Whittlesey House, London, McGraw-Hill Book Co., Inc., New York, 1936, pp. 65–68.

[147] Adapted from "Highlights of a Housing Tour of Northern Europe," Geo. H. Gray, "The Octagon," Dec. 1937, Feb. 1938, Am. Institute of Architects, 1741 New York Ave., Washington, D. C. Reprint in 1938.

# PART II. THE SOCIAL, ECONOMIC, AND TECHNOLOGICAL BACKGROUND

## SECTION I. THE POPULATION TO BE HOUSED: THE FACTORS WHICH INFLUENCE IT AND THEIR POSSIBLE CONTROL

### General Considerations

The crux of the housing problem is the population to be housed. It is not so much a problem of houses as of people, their needs and their incomes. What proportion of our population are in families, what proportion are bachelors (men or women), what proportion of aged couples, each group requiring its own dwelling? What about future trends—will they continue as at present? The possibility of a falling off in the rate of population growth? Geographic, economic and social shifts in the population? What effect will the so-called "foreign" group have on the future character of the population? More specifically, what connection is there between housing and education, crime, health? What about the alleged large proportion of families whose incomes are inadequate to pay for good housing and the other necessities of wholesome living? How are they distributed in the nation? These are questions to be considered in a long-range housing program. They affect not only the national program, but the local programs, both urban and rural. We hope to show that the solution of our critical housing problems is to be found in the answers to some of these questions.

In the main, our knowledge of the make-up of our population has come from the census which the government has been taking every decade for the past 150 years; but other studies have been found necessary as special situations have arisen. Thus, early in the depression, when public housing was being pushed as a desirable field for public work projects, it was realized that there was lack of knowledge about existing housing conditions; so in 1934 a real property inventory was set up in 64 cities, a 12 per cent sample of the country as a whole. Other cities were later added, making it a 44 per cent sample. Again during the depression, it was realized that we lacked information as to many items such as employment, the incomes and expenditures of families of various classes; so a mid-decennial census by samples was taken in 1935–36, a year when there was an upswing of many phases of business and many other conditions were comparable with 1926, commonly accepted as approximating a normal year. Unexpectedly to most observers, it disclosed that the rate of increase in our population was on the decline. The 1940 census has already shed additional light.[1] Thus from the census and other special surveys we have obtained much new light on the population to be housed, what it is, where it is, and what changes it has been undergoing. It is on knowledge of the population to be housed that all housing programs must be based.

[1] For list of Housing Supplements and Bulletins, see "Census Bureau Publications—Population and Housing," Supt. of Documents, Washington, D. C.

### Population Trends

*Mobility is an American Characteristic*

Mobility—geographic, economic, and social—is one of the chief characteristics of our American population. Out of mobility come changing trends. While the factors which determine this mobility may at first sight appear beyond our control, on closer scrutiny we find that many of them are more capricious than inevitable, and therefore subject to influence and control. In the past we have enacted laws to control immigration; now we need regulation of promiscuous wholesale local inter-state migration ("in-migration") for without these regulations thousands of families have been living in squalor and have seen their children deprived of the privilege of schools. We have enacted laws to control import tariffs, which it was claimed would protect our American standard of living, supposedly higher than in the competing foreign countries. Such legislation bears on incomes and standards of living and the standards of housing in particular; so it affects housing at its very roots. More recently we have had city planning and state planning, regional planning, and national planning. These more recent types of planning have demonstrated their usefulness in many ways, some of which have indirectly and directly affected family incomes and budgets, notably the budget item for rent—as we shall presently see in discussing planning in the New England area. In order that we may reap the full results which seem possible through scientific direction or control of various situations, more of our local planning organizations must come into effective operation.

All our plans are predicated on our experience, particularly on the trend of experience in the recent past. As every trend is the result of a certain combination of causes (the resultant of all the forces) so the trend may change if any of the causes change. In any planning it is, therefore, more important to study the causes of trends than the trends themselves. We must analyze the causes in order to determine the probability of their continuance.

Questions asked in connection with the draft in the 1916–1918 phase of World War I revealed a greater degree of illiteracy than had been suspected, and, being attributed to the unabsorbed immigrant population, it finally led to a further limitation of immigration—at least until such time as the former immigrants should have a chance to become more fully

Americanized. Such changes, such causation of trends and changes in trends (first the policy of inviting unlimited immigration, then the policy of discontinuing it) have a significant bearing on both the size and the nature of our population and hence on housing. Other such problems of population change may arise in the not distant future. In World War II, industries have already caused migration between areas as widely separated as the Rocky Mountain states and New England. Conceivably international shifts may come after the war.

*The Significance of a Change in Birth Rate and Factors Affecting it*

In the past all plans of industry, of commerce, of our cities and of the nation have been based on the assumption that we were going right on growing as we had in the past. It was the interim census of 1935–36, as we have said, which revealed the news, startling at the time, that the *rate* of increase of the population of the United States was on the decline and had been since 1930. Many urban areas, however, were growing fast because of an influx of people from the rural areas, seeking employment. The reduced national rate of increase turned out to be due to a pronounced reduction in birth rate. Actually there had been a very gradual reduction for nearly a hundred years, but the fact was not apparent in the total count because of the rapidly increasing immigration. The 1940 census shows a continuation of these trends, and, what is of great significance to housing, that the size of families is decreasing and their number increasing. Statisticians have estimated that since the birth rate was found to be decreasing faster than the death rate, the rate of population increase will probably fall gradually to the zero point about 1980 and that at that time we shall arrive at our maximum population of 150 millions, after which there will be a gradual decrease. From 1950 to 1980 a marked increase is foreseen in the proportion of the population above the age of forty and a decrease below the age of twenty, while the proportion of those between twenty and forty will increase only slightly.[2] This, as Professor J. J. Spengler puts it, will bring us toward a state of "gutless gerontocracy"[3]—a state in which the old predominate over the young. All this, of course, provided there are no changes in the factors which make up the final trend; but the proviso is important.

Conceivably there may be a change in several of the factors causing the recent changes of trend. It may well be that the birth rate will take a turn upward, for it is quite conceivable that a rising generation may take a more vigorous and less self-indulgent outlook on life and that there may be an increase in the rate of births insofar as the present low rate is the result of deliberate birth control; and that the number of involuntarily childless parents may be reduced by medical aid. Greater security might also be expected to lead to more children, in families operating on limited budgets; less security, on the other hand, might lead to further birth control among such families. The draft of 1940–41 almost immediately raised the marriage rate and shortly the birth rate. And also it may well be that as a result of the present world crisis this country will raise its immigration quota. For some time, except possibly during the war, the death rate may be expected to continue to fall and the span of life to increase, though of that not even George Bernard Shaw can speak with finality.[4] Such changes in trend are certainly possibilities. In planning housing projects, whether for sixty years or forty, it is important to know as much as possible about the size of families and the proportion of children to adults.

If this sense of security can be had in our rehabilitated and regenerated cities during the coming decades, as we suggest in a later chapter, it may well be that the large number of city people in these now obsolete areas will also become more prolific. That greater security and decent surroundings are already affecting the younger couples in wholesome housing projects was confidently expressed to the writer by the superintendent of one of the PWA housing projects after the experience of one year of occupation. The shifting of population from country to city and from city to suburbs appears to this writer unstable and uncertain, with many families an experiment. But whatever or wherever the families are, if greater security can be had, it seems reasonable to expect an increase in birth rate.

Outstanding among these changes in the trends of population is the fact that the general knowledge of methods of birth control has led to a far greater reduction in birth rate among the more prosperous classes than in the less prosperous class, to the extent that if the present rate continues, one-half of the population of the next generation will be the offspring of that one-fourth of the population which is bred in the slums.[5] This least prosperous and responsible group is to a large extent the victim of its slum environment. For while it includes some who have physical and mental handicaps, the housing experiences of Holland and of England afford evidence, convincing if not conclusive, that the majority of these people are capable of rising above their former ways of life when provided with good housing in a wholesome neighborhood. It is significant, as we have previously stated, that while British housing experience shows that ninety to ninety-five per cent of adults readjust their way of living to new and wholesome environment, among the children nearly one hundred per cent readjust themselves. This response to environment, as we shall later point out

[2] Data from "The Problem of a Changing Population," National Resources Committee, 1938, p. 25 et. seq.

[3] Quoted from Minneapolis Star Journal.

[4] See "The Mystery of Aging," G. W. Gray, *Harper's Magazine*, Feb., 1941.

[5] "Technological Trends and National Policy," National Resources Committee, 1938, p. 8.

more in detail, gives importance to the place of better housing in the future welfare of the country.

*The Shift from Rural to Urban Areas*

The shift of population from country to city which we have previously pointed out, and which is shown in Graph II, A, (p. 119) is, to be more precise, from the farms into urban areas (including suburbs), and is due to a number of causes, which in general can be traced back to technological changes. To the original attraction of greater industrial wages which started the movement, other more recent changes are added; for with the aid of gasoline and electricity the farmer can produce more on the same land with fewer assistants. Trucks, refrigerated cars and refrigerated ships put consumer cities within reach of a greater territory from which their food may be obtained. These changes have brought nearby poor soils and short growing seasons into competition with distant good soils and long growing seasons, for example, New England in competition with Florida; they have contributed largely to the feeling of insecurity which is common among the young people of the less promising rural areas and which urges them cityward. In the country, where most of those who remain lead a vigorous life and have at least reasonable security of the sustenance of life, the birth rate always has been and still is higher than in the cities. The move from country to city tends to bring about fundamental changes in character and in the outlook on civic responsibilities, which we shall later discuss more at length. A movement from city to farm would have a reverse influence. So both the rural-urban population movement, and the urban-rural movement have an important bearing on both the location and the type of housing to be provided.

Simultaneous with the general population move from the country toward the cities, there has been within the area of urban influence an important secondary movement—a very general trend from the centers toward the suburban and surrounding rural areas. This is largely because of the obsolescence of areas near the center of the cities, of the increasing congestion of traffic with its noise, smoke, nervous tempo and of the cheerless outlook in the obsolete and obsolescent areas near the center of the cities; and also because a move to the suburbs dodges the more inflated land values, and the consequently higher taxes and rents of the city and permits a more economical type of construction. Conceivably the change of tempo and the rural outlook may bring larger families to many city mothers who have gone rural or suburban, thus off-setting the tendency to gerontocracy.

As bearing on urban population trends, it is to be noted that up to the present, home-ownership for those with modest incomes has been possible only in the suburbs, and that those acquiring new homes have predominantly been young couples with children or with the hope of having them. With these a chance for the children to play in rural surroundings has no doubt been a great incentive. But whatever the incentive, the net result has been to draw off from the center of the city to the suburbs not only an appreciable portion of the present urban population, but the source of normal future increase through births. From the urban point of view this is a strong argument for the development of adequate facilities for outdoor play in connection with rehabilitated or redeveloped neighborhoods, and it should also be an inducement for cities to encourage mutual or coöperative housing.

*The Possible Effect of State Planning*

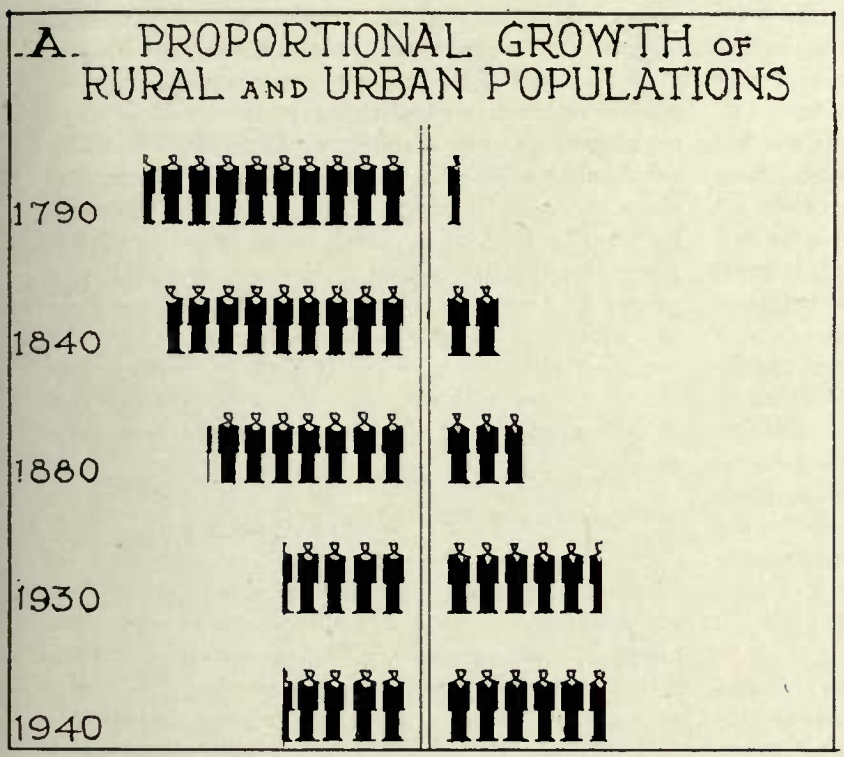
But migrations between rural and urban areas are not entirely fortuitous. State planning, for example, seems to have had an effect on population in some states. Let us compare first Vermont and New Hampshire. In the last decade Vermont lost 1 per cent in population, while in the previous decade she had gained 2 per cent; New Hampshire gained in both decades, but more in the last decade, 5½ per cent against 5 per cent.[6] The two states lie side by side, with somewhat similar physical and cultural characteristics, and both are predominantly agricultural. What is the difference? One interesting and seemingly significant difference is that early in the last decade New Hampshire organized, through the State Planning Board, a conspicuously active and successful campaign for the exploitation of all her resources, natural and man-made: soil conservation and flood control, scientific farming and marketing of crops, the development of water power, a better distribution of schools, an improved system of rural and through roads (without spoiling quaint villages and scenic roadsides), the extension of recreation facilities (such as summer cottages and camps, and winter ski-runs), and many other constructive measures. Vermont did some of these things, but not in the same thorough-going way.

The other predominantly agricultural New England state, also endowed with the attractions of water, woods, and mountains, is Maine. The State of Maine Planning Board also conducted a development campaign. The rate of increase of population in Maine from 1930 to 1940 was almost double that of the previous decade (6.2 per cent and 3.8 per cent, respectively).

We are not suggesting that planning alone accounts for these changes in population trends. Such planning, however, does affect several fundamental factors. Extension of the development of natural and man-made resources increases incomes, the summer resident increases the cash income of many of the nearby year-round residents, which is particularly important to village families with small subsistance farms. Also the summer resident, usually an urbanite, may change his official residence from his winter to his summer home, possibly because of advantageous tax rates. The increased general prosperity tends to retain the native population and even to attract people from other states. Moreover, with increased prosperity comes an increased sense of security and presumably

[6] Release for December 5, 1940, Series P. 2, Table 4, Bureau of the Census.

GRAPH II, A AND B. SOME POPULATION TRENDS SINCE 1790*.



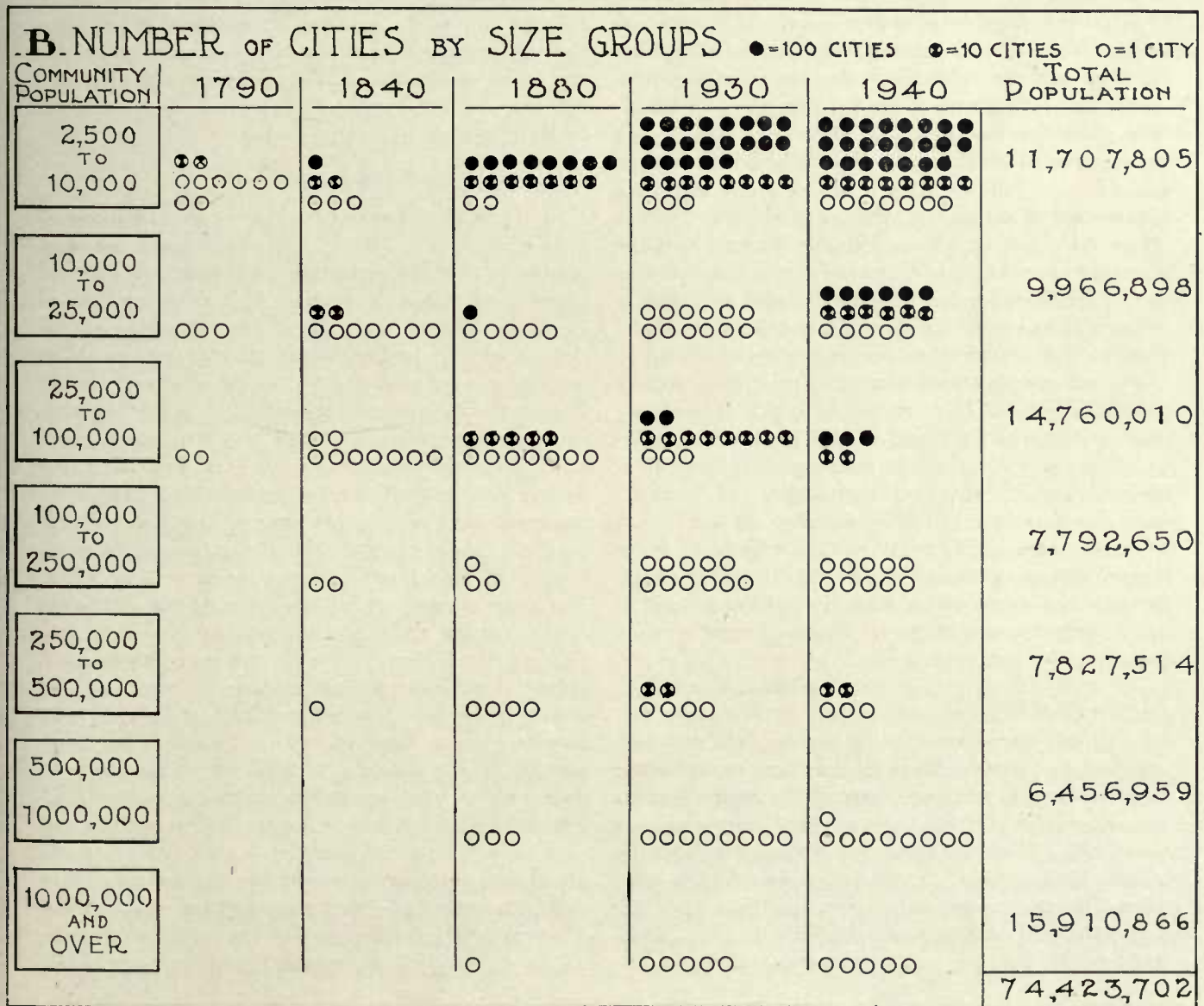

A. Urban populations are defined as those over 2,500, rural as those with less.

Each human figure represents 10% of the total population of the United States.

The 1940 increase over 1930 was: Urban 7.9%, rural 7.18%, which was almost entirely in non-farm areas.

B. Note that the figures for 1940 show greatest increase in communities from 10,000 to 25,000, many of which are in the metropolitan area of larger cities.

* Based on figures 1 and 2 in "Our Cities" op. cit. Data for 1940: in "A" from U.S. Census Series PH-3, No. 5, Table 1; in "B", from PH-3, No. 4, Table 2.



a willingness to assume the responsibility for more children. The effect of planning seems to be further supported by the situation in the three remaining New England states, whose prosperity relies more on industry than on rural activities and therefore is less quickly affected by such planning programs. Here the population has declined, and the rate of decline seems to be roughly in reverse proportion to the success with which the several states have carried out rural improvement programs similar to that of New Hampshire.

With the increased family prosperity comes increased ability to meet all requirements of the family budget, including rent for good housing. Whatever contributes to the ability of the family to meet its budget contributes to reduce the public housing problem at its source. That state planning can make such a contribution seems to be indicated in the situation just described.

*Regional Migrants*

*Grapes of Wrath* is still fresh in many minds. People discontented with conditions in one part of the country may with ease pack the family car and move, or, if single, hitch-hike to anywhere. This situation adds a factor of uncertainty to the population predictions of any given locality, affecting alike the poor locality and the promised land. The most commendable plans for better use of land, even such as the reclamation of the Dust Bowl, which do not include plans for the people on the land, are plans without a plan—without a major control plan, which is basic to all sound planning. The admirable plans which the Farm Security Administration has now worked out for caring for the migrants from the Dust Bowl have at least to some extent made good the deficiencies of the original partial plan, the emergency plan of extending the wheat-growing area during World War I. *See Plates XLV and XLVI, pp. 205 and 206.* The expansion of industries for World War II caused both intra-regional migration, and inter-regional migration. From Massachusetts, New Hampshire, and Vermont and also from the Mississippi valley to the valley of the Connecticut; to Southern California from everywhere. Between the Rockies and the Mississippi, between the shores of the Atlantic and the summit of the Alleghanies, new industries have made new towns—permanent or temporary?

*Social Shiftings*

Aside from geographic migrations, we have constant migrations or shifts of families from one economic or social level to another—some of the less prosperous becoming more prosperous, some of the prosperous, less prosperous. This has been one of the most dramatic phases of American life. It still goes on. We may hope that those who rise outnumber those who fall; but we should plan that all shall live in an environment which will be conducive not to falling but to rising. It is true that the receding rate of population increase has, at least until recently, been common to most countries of western civilization—in all countries that have mastered those modern means of developing power and of mechanizing all kinds of work, which results in the need of fewer helping hands except in those countries in which drastic preventive measures have not been adopted. Such an exception is France, where, following World War I, generous prizes were offered for large families and encouragement was given to immigration of farm families from Italy. But with our civilization in a period of transition, the wisest cannot predict with assurance either the continuation of present trends or the possible changes from these trends.

*The Passing of the Foreign-born*

The census reports have classifications of "foreign-born" and of "foreign-born parentage." With immigration of only limited quotas since 1929, it is obvious that the proportion of the population so classified is diminishing and, unless increased immigration is permitted, will in a short time become insignificant. But here again the present trend will be changed if refugees are to be received in appreciable numbers. Only in proportion as such refugees measure up to high standards of education, of attainments and of living, will they become assets and not problems, eligible for home ownership or normal rents.

*Trends Upset by Political Upheavals*

Even the whims of leaders change the course of civilization. Who would have predicted, even a quarter of a century ago, that intellectual and cultured Germany of those days would be transformed into a Germany looking backward to the primitive for its culture and to barbarism for standards of relations with its weaker neighbors? Gone is medieval Czarist Russia, gone the once easy-going Italy, gone the once genial and artistic Japan, and China is stepping out of a past measured by millenniums. Men, particularly the leaders among men, are an unpredictable crop. No one could have predicted the rise of Napoleon who upset the balanced ways of Europe; nor the sudden death of Lincoln which brought about the carpet-bag spoliation and the near destitution of the culture of the old South; nor the rise of a sword-rattling Mussolini, or a blitzkrieging Hitler. Those are not realistic prognostications that leave out of account the possibility of strong leadership to break current trends. This can happen even in times of peace. Wherever any large portion of a population is deprived of the needs of decent living, whether through exploitation or accident, either the situation will be improved in an orderly way or there will be social disorder—as witness the world about us. Nothing, however, has happened to shake our faith in the belief that a courageous, right-minded, vigorous and informed people can, without disorder or the aid of dictator, establish such controls as will

enable it satisfactorily to adjust itself to a changing world. Among the most important of such controls is public housing.

## Our Changing Culture

### *The Broad Picture*

Our culture, our civilization, is not all at one level. In each rural area, in each city, in our nation as a whole, and in each and every nation there are several civilizations. Each community and each nation acclaims as its civilization that upheld by the dominant group—Germany as a republic acclaimed one civilization, under the Nazis another, and such it is. For the stability of any nation it is essential that its highest civilization shall not be limited to a relatively few, that there be no large submerged mass living in an inferior civilization, no remnants of the feudal system of over-lords and dependents—else beware of the whims of those capricious leaders who play the masses as the pawns in their battle for power. One measure of civilization is the standard of home life, of the home environment. It is in recognition of this fact that the governments of so many countries acclaiming a high civilization have in our day introduced the new and revolutionary policy of assuming responsibility for improving the home environment of those large groups of their populations which have been unable themselves to secure such environment and had for that reason been reverting toward less enlightened civilization.

The objective of a public housing program, then, is to supply a better way of living for a large portion of our population. Whatever affects the way of living of this group is of importance in studying the housing program. Certain broad changes in our American culture have been going on for some time, changes *within* the population groups, changes which seem destined to have an important bearing on our national outlook. First is the change from the traditional attitude represented by the rural areas; second is the changing attitude of the so-called "foreign element."

### *The Older Rural Culture*

When this country was settled, the only way of living was the way of an older civilization, which still is largely perpetuated in many rural communities. As small cities grew into large ones, first on the seaboard, then over an area which has expanded from the Atlantic to the Pacific, they experienced the same symptoms of congestion and competition which have led to the extremes of worldly successes and failures that have characterized city populations in all countries and in all ages. The immigrants of the early half of the last century came in relatively small numbers, largely from a background of culture similar to that of the earlier colonists, and they were quickly absorbed into the American culture. We thought we had been absorbing the immigrants who came in the latter part of the last century and on up to World War I, but the illiteracy discovered in the draft was a rude awakening.

Strange changes followed the World War of 1914–1918. The influx of war wealth, distributed through nearly all strata of the population; the scrutiny, if not the effort at debunking, of every tradition and every person of the past (Washington, to Lincoln, to Queen Victoria); prohibition, the last stand of "puritanism," introducing bootleggers and the bootlegger patrons and the resulting chain of organized crimes. All these were typical of the symptoms of a world disillusioned by a devastating war and skeptical of the validity of the customs which had preceded it. With the bursting of the bubble of the "Golden Twenties" came the final disillusionment. The apparently strong framework of our national life seemed riddled by termites, for not only had the floor of our economy collapsed, but serious infestations were disclosed in the very framework of our social life—bitterly opposing factions and schisms appeared in many groups intent on increase of power or wealth. We seemed to have sold our birthright of high living and civic responsibility for group advantages secured no matter how, to have exchanged the liberty of the founders for the license of irresponsible group leaders—short-sighted and with glamorous but nebulous promises. Yet, despite these deteriorating tendencies, here we are today launching on a new era of improvement of the masses by supplying a wholesome way of living in well-designed housing and of assuming, for the most part cheerfully and wholeheartedly, increased sacrifices to maintain the bulwarks of democracy. It has, indeed, been a strange series of events.

Out of the old way of living came much of our finest leadership in city, state and nation. We may well ask if this source of leadership may not be jeopardized by changing standards. Farm life, at its best, carries with it a rigorous way of living not dependent upon the conveniences and gadgetries of the later urban civilization. At its best it breeds greater individuality and a higher sense of responsibility, beginning in early youth through the assignment of tasks. At its best, rural life, including the village, has best retained the democratic tradition of a neighborly community of interests—of which more presently. As we shall see a little later, this "best" seems to be about one-half of the rural population—one-fourth of the total national population. While rural life has already undergone many physical changes since the industrial revolution, it is, in the opinion of some competent observers, due to undergo even more radical changes, particularly in the direction of economic reorganization. The cities of today, on the other hand, reflect in a marked degree the impact of the industrial era of which they are essentially a part. But while the cities have in many ways grown and prospered economically under this impact, the rural areas have declined in relative population and have lost economically. Since the urban and the rural communities are mutually dependent, an eventual readjustment is inevitable—either that or the calamity of under-populated rural

areas and over-populated urban areas. Whatever the readjustments may be, it seems reasonable to suppose that they will affect the long-range housing problem.

*How to Recapture Some of the Advantages of the Older Culture*

Arthur E. Morgan, hydraulic and reclamation engineer, educator and realistic philosopher, is convinced that the small community is "the seed bed of civilization, the source of basic character and culture." He characterizes the community as a group in which there is a neighborly spirit, a bond of common concern and interest, "a willingness to help in need, not as charity, but simply as the normal mode of life" . . . "a group with common aspirations for which the people plan and work." . . . "Organized Society Grows out of a Community, and can thrive only so long as the spirit of a community pervades and vitalizes it." Mr. Morgan finds that this spirit has been receding before the advance of those large-scale operations which have been growing larger with the increasing size and application of machinery. Somehow we must recapture the community spirit. Failure to do so Mr. Morgan sees as a threat to the very basis of our civilization. While in the past he sees the community as a small group, he recognizes that with modern transportation and communications it may be extended in area.[7] His data and his reasoning are interesting and convincing. How to recapture this community spirit we discuss in the Chapter on Urban Rehabilitation, p. 149.

The solution which Ebenezer Howard suggested in England may yet prove to be available as a partial solution in this country, but a partial solution only could it be, because even the self-contained garden city (which our own three "Greenbelt" towns are not), with its agricultural greenbelt, would affect in greatest degree the *future* population, the potential increase in numbers, rather than any large proportion of the populations already established at this time in the rural areas and in the urban areas. If our population were growing at the former rate, possibly we might with safety advocate garden suburbs and satellite cities as a general procedure. But in the present uncertainty as to future population growth, and with the possibilities yet untried for the comprehensive regeneration of our cities through new low-cost housing projects and the rehabilitation of obsolete neighborhoods, it would not seem wise to advocate decentralization, at least not as the usual procedure. Nevertheless it may prove desirable and feasible to plan garden cities about some of the sizeable war industries which have been established in rural areas not too remote from large cities.

In many older countries rural life has been centered about agricultural villages, which enjoy some of the advantages of urban life. Russia's agricultural "communes" might be said to be a modern organization along these lines, coupled with the added idea of completely mechanized coöperatively owned equipment and coöperative buying and selling. This may or may not be a good answer, but at least it suggests that there may be some other method of farming than the one which has gotten us into the present impasse of much profitless farming and of rural poverty, entailing public relief. Although any fundamental change in the economic structure of the rural regions may be well in the future, significant changes are at this time being initiated in American rural life through an improved economy, such as a program of contour tillage, rotation of crops, balanced crops, electrification, better roads, the consolidation of schools, and modernization of existing farm buildings and the building of new ones (including houses), all with the aid and guidance of the Department of Agriculture—changes which as yet are conspicuous only in those areas most needing them, notably certain of the southern states. With these improvements in the agricultural economy have come improvements in the housing, not only of the owner-farmer but of the tenant-farmer, the sharecropper and the hired farm hands—all accomplished through the Farm Security Administration and its predecessor agencies in the Department of Agriculture and through the rural housing of USHA, as outlined earlier and in Appendix A. We hold that *it is of vital importance that public assistance for the increased opportunity for security and prosperity should be so effected as to maintain the traditional vigorous rural character, guarding against the undermining influences which have so commonly accompanied such assistance in the urban areas.*

The farm population falls generally into three broad groups, (a) owner-farmers, (b) tenant-farmers, (c) day laborers; and in the South there is also the sharecropper. Provided they are on good land, each may be sufficiently prosperous to have fairly good housing; but on poor land the proportion of inadequate housing increases rapidly from owner down to tenant. The President's Committee on Farm Tenancy reported in 1937 "a series of groups of farm families whose insecurity is a threat to the integrity of rural life" and that "in number these groups constitute fully half the farm population of the country." So, incidentally, one-half would seem to be the limit of those who maintain rural life and traditions at their best. It further reported that most frequently, and to the greatest degree, insecurity is found among tenants and laborers. The laborers were one-fourth of the total gainfully employed in agriculture in 1930, before the effect of the depression was fully felt. Of the total rural population of about 13 million families, slightly over half are on farms, the remainder in villages of less than 2500 people, among whom is found the greater part of those on rural relief. *See Graph II, B, p. 119.*

[7] "The Small Community—Foundation of Democratic Life—What It Is and How to Attain It," Harper and Bros., New York and London, 1942, pp. 11, 23, 22, 21.

*The Later Urban Culture*

Culture in the cities differs in many interesting respects from that in the country. Cities in the colonial settlements were non-existent. The colonies started as all-rural populations and remained practically that until the Revolution. From then on the urban population (cities over 2500) grew rapidly from 3 per cent of the total in 1790 to 7 per cent in 1830, to 25 per cent in 1880, to 56.2 per cent in 1930, to 56.6 per cent in 1940. *See Graph II, A, p. 119.* On the other hand the family of the city has grown smaller and the old age group larger. Under these conditions the cities do not maintain a birth rate sufficient to reproduce themselves and must recruit from the country. With certain exceptions our cities contain more women than men. The foreign born and their children constitute nearly two-thirds of the population of cities of one million and over; but the proportion declines gradually through cities of small size until in the rural area the foreign population is only one-sixth of the total. Added to the racial and ethnic heterogeneity, there has been the migration of the negro from the southern rural areas to the larger cities, mostly in the industrial areas of the north. So in effect reported the National Resources Committee in 1937, and it continues: "Never before in the history of the world have great groups of people so diverse in social backgrounds been thrown together in such close contacts as in the cities of America." "In part and for a time [they] remain segregated or come into conflict with one another."[8] Thus the growth of cities changes the pattern of our cultural life at many points.

To the extent that large numbers of people bring great advantages for all, large cities are to be desired; to the extent that the advantages are reaped by the few, while for the many there is deprivation, large cities are *not* to be desired. Civilization is after all only a coöperative way of living, based on the fundamental idea that each must yield some of his rights as an individual in order that he may enjoy larger security and advantages as one of a group—common streets, common sewers, common officers to enforce order, common fire protection, common schools. To the extent that the strong prey upon the weak, civilization gives way to the law of the jungle. In the big cities, as we have before pointed out, the strong do tend to rise and the weak to sink. But the civilized way is for the community, through the coöperation of all groups, to prevent the extreme operation of this trend. Therein lies the great problem and the great challenge of our time. One of the answers is wholesome home environment for all classes.

The suggestions of the National Resources Committee that "the city is not conducive to the type of family to which our civilization has been accustomed" is based on the experience of our cities as they have existed for the most part during the period in which the disadvantageous conditions have developed. But only a pessimist could assume that the past trends must carry over into the future. As a hopeful and confident people we must plan something better. Individual houses, whether single, semi-detached or in rows, each with its own garden or grass plot, tend to maintain the strength of the family as a social unit. Full responsibility for house and grounds and coöperation in the activities of an organized neighborhood such as exists in a public housing project, tends to foster a sense of civic responsibility and pride. This has been clearly demonstrated in the longer European experience with both public and coöperative housing. Thus public housing of all kinds is one way to recapture some of the virtues of the older way of living. For each family to possess its own home, offers even greater promise—but that obviously is as yet for a relatively limited number.

Among the foreign populations particularly in the larger cities there are many who have thrown into the discard the traditions which their parents brought from the old country, traditions for the respect of the best that has come to them out of the past. If, as often happens, the younger generation adopts no adequate standards to replace the old, then their citizenship is not an asset to the country. Presumably the schools are doing their part, but if after school hours and school years they have only the streets and dives of the slums for their recreation, then the results of schooling, the sharpening of the childrens' wits, may not be turned to good account. For this group especially the recreational and social facilities of organized housing projects are of inestimable value.

*The Segregation of Minority Groups*

The existence of these old-world cultures and traditions has a bearing on the question of whether or not homogeneous minorities may not in some cases, to the advantage of all, be segregated in separate housing projects. A report of the National Resources Committee has this to say:[9] "The existence of diverse cultural heritages in American society has often been regarded as an evil, to be overcome as rapidly as possible. Movements initiated for the purpose of promoting harmony have sometimes tended, through excess of zeal, toward enforced assimilation or regimentation. They have tended toward the suppression of initiative, the destruction of traditional moral and artistic values, the fostering of feelings of inferiority and confusion, and toward personal and social conflict." Continuing the report states, "cultural assimilation can be effected by education or thwarted by legislative interference; but above all it remains a matter of community process and of participation—economic, political and social. Accordingly, the waning enthusiasm for Americanization programs and the much advertised failure of the

[8] "Our Cities," National Resources Committee, Gov't Printing Office 1937, pp. 9, 10.

[9] "Problems of a Changing Population," National Resources Committee, U. S. Gov't Printing Office, Washington, D. C., May 1938.

melting-pot are to be accepted not as failure, but as a change in emphasis—a change away from attempts to enforce conformity and toward an understanding of the fundamental conditions and character of cultural processes. This changing emphasis is in part a new appreciation of cultural diversity. Americans have come to realize that while we do not have a wealth of cathedrals, fine carvings, old family customs, or a national folk music and literature, we do possess an abundance of cultural resources in the heritage of many American groups. Such recognition is passing beyond the stage of antiquarian interest in curiosities and relics; it is becoming a spontaneous and wide-spread movement of great importance." The Report further states: "A change of attitude toward cultural diversity is also supported by the democratic and humanitarian impulse to make the ideal of equal opportunity for all a reality, even as affecting the lives of members of minority groups. It clearly follows as a corollary to this ideal, that cultural diversity shall not prejudice personal or group development."

Of the negro group the report says: "Negroes even in the areas where they are culturally most isolated adhere to institutions that are Anglo-Saxon in origin. They live in more or less constant contact with, and dependence on, the organization of the dominant white society in their communities."[10] . . . "The existence of social stratification and cleavage within Negro society tends to destroy the cultural cohesion of the group."[11]

*Conclusion*

In conclusion we may say that the attitude of responsibility which characterizes the older and the traditional rural areas, particularly where there is a large proportion of owner-farmers, need not be sacrificed or diminished with the adoption of a modern farm economy. The conservation of soil and water are a sure gain. Electrification and other mechanization of equipment, the telephone, radio, and many household labor-saving devices and amenities, obviously, are not in themselves softening—though they can be abused to that end. If they have been earned, they can safely be counted as total assets. If they come too easily, as hand-outs, they may cost more in character than they are worth in mechanical efficiency. So far, the Farm Security Administration seems to us to be working wisely in aiding farm economy, but such programs could easily be extended onto thin ice. The USHA rural project was carried on with the cooperation of FSA and in their tradition. In the urban areas the public housing projects are commonly so administered as to encourage coöperation and a sense of responsibility for the upkeep and proper functioning of the project. Through the extension of this pattern of better environment, responsible and coöperative citizenship also can be extended more widely throughout the population. The establishment of public housing seems to hold cultural potentialities as great as if not greater than those realized through the establishment of public schools—for the very potent reason that its influence begins in infancy and extends throughout life.

[10] "Problems of the Changing Population," op. cit., p. 239.
[11] Op. cit., p. 242.

## The Environment in Home and Neighborhood

*Health and Mortality, Delinquency and Crime*

There is an association between a slum environment, poverty, disease and crime. One might add other characteristics more difficult to measure—malnutrition, ignorance, demoralization. The association has not been questioned; but there has been question in the minds of some as to which were causes and which effects—whether criminals resort to the slums, or whether a slum environment generates criminals; whether people of lowest physical and mental equipment inevitably sink to the slums, or whether a slum environment is an insurmountable handicap to maintaining a normal physical and mental development. In point of fact these opposite conditions are not mutually exclusive; one condition may hold in the case of one family and its opposite in the case of another family. Some families sink into the slums through their own failures; others, brought there through circumstances beyond their control, find it impossible to overcome the handicaps.

TABLE XIII. SOCIAL CONDITIONS IN A SLUM SECTION IN CINCINNATI COMPARED WITH ENTIRE CITY

Compiled from data prepared by Mr. C. M. Stegar, Commissioner of Bldgs., Cincinnati. (As reported by Mabel W. Walker in Urban Blight & Slums, op. cit., p. 39.)

| | Cincinnati Number | Slum Section | |
|---|---|---|---|
| | | Number | Percentage |
| Population (1930) | 441,160 | 125,558 | 27.8 |
| Area (square miles) | 71.7 | 4.5 | 6.0 |
| Relief Families,* July 1 to Dec. 31, 1933 | 23,303 | 14,077 | 60.4 |
| Respiratory deaths | 559 | 263 | 47.0 |
| Epidemic and Infection deaths | 644 | 349 | 54.2 |
| Major offenses 1931–1932 | 17,281 | 11,856 | 64.0 |

* Direct relief and work relief from public funds.

The relationship between slums, poverty, crime and disease is evident in every large city and is particularly well exemplified in the Basin section, adjoining the harbor in Cincinnati, where an unusually thorough study was made, as summarized in Table XIII. The condition of over-crowding is indicated by the fact that here in this 6 per cent of the area of the city is 27.8 per cent of the entire population of the city. Other conditions are indicated by the fact that in that small area there was 60.4 per cent of all the relief families in the city; in that small area were about half the deaths from respiratory, epidemic and infectious diseases, all of which are associated with over-crowding;

in that same small area occurred 64 per cent of all the major crimes.[12] This is fairly typical of conditions in most large cities, as was brought out in the Wickersham Report.[13] The rate of infant mortality seems to be highest in the stratum of families paying the lowest rents. Studies, based on census figures for Cleveland (1930) show that in the stratum paying $15 monthly there were 65 deaths for every 1000 births, in the stratum paying from $20 to $25 there were 45 deaths, in the stratum from $30 to $35 there were 36 deaths, in the stratum from $40 to $45 there were 17 deaths.[14]

As to the criminal record of the slum population, they are well illustrated by statistics compiled for Cleveland, O., where, in a slum population only 2.5 per cent of that of the entire city, the proportion of juvenile delinquency, illegitimate births, crime and prostitution ranged from 6.8 to 26.3 per cent—as shown in Table XIV.

TABLE XIV. SOCIAL CONDITIONS IN A SLUM SECTION OF CLEVELAND COMPARED WITH ENTIRE CITY*

Compiled from data in "An Analysis of a Slum Area in Cleveland," by Rev. R. B. Nevins, with counsel of Howard Whipple Green; Cleveland Metropolitan Housing Authority, 1934, p. 2, 4, 5.

| | Cleveland Number | Slum Section | |
|---|---|---|---|
| | | Number | % of City Item |
| Population (1930) | 900,429 | 22,236 | 2.5 |
| Area | | | 0.75 |
| Relief families given material assistance—1932 | 35,305 | 2,858 | 8.1 |
| Number families per | | | |
| Crime—murders | 998 | 21,300 | 21.3 |
| Vice—Houses of Prostitution | 373 | 98 | 26.3 |
| Delinquency—Boys | 6,614 | 447 | 6.8 |
| Illegitimate Births | 298 | 31 | 10.4 |
| Tuberculosis deaths | 3,127 | 393 | 12.5 |

* Since 0.75% of the city area contained 2.5% of the population, the ratio of density between the area and the city as a whole is 2.5 to .75 or 3⅓ to 1.

Infant mortality is far greater among those of low incomes than those of high incomes. Studies in Cleveland in 1930 showed 65 deaths per thousand births for families paying a monthly rent of $15, while for families paying from $40 to $45 the number was 17. The rate of general mortality is also greatest among the lower income group, as is strikingly apparent in Table XV.

In the transition from the higher income occupations to the lower, the death rate changes quite gradually and uniformly up to and including the skilled workers, relatively few of whom live in the slums; then the rate increases more markedly in the semi-skilled group, a somewhat larger proportion of whom live in the slums; among the unskilled workers, a large proportion of whom live in the slums, the rate takes a pronounced jump. That the general environment is an important factor seems to be indicated by the fact that among the agricultural workers the death rate is far lower than in all other occupations, less than half that of the unskilled city workers—while on the whole the factors of income and medical care and variety of diet probably vary but little.

These relationships between slums, poverty, health, mortality and crime do not necessarily indicate the cause. For the cause we must look at statistics of families which have moved from slum areas into improved housing projects, and turn to Europe, where improved housing has been longer established.

In one project in Glasgow, over a three-year period, the infant mortality rate was one-half that in the city as a whole; in Birmingham it was one-third; in Manchester it was one-half that of twelve slum areas—over a five year period before clearance. In these same cities deaths from several types of disease show an even more striking reduction within these housing estates. *See Table V, p. 62.* This is most convincing evidence, though it is not conclusive proof that the better housing and that alone was the cause for the better showing.

TABLE XV. DEATH RATES BY OCCUPATIONS SHOWING HIGHER RATES FOR LOWER INCOME GROUPS*

| Occupation | Rate per 1000 |
|---|---|
| Unskilled workers | 13.1 |
| Semi-skilled | 9.9 |
| Skilled Workers and Foremen | 8.1 |
| Clerks and Kindred Workers | 7.4 |
| Proprietors, Managers and Officials | 7.4 |
| Professional Men | 7.0 |
| General Rate | 8.7 |
| Agricultural Workers | 6.2 |

* Prepared from data in U. S. Pub. Health Dept. Vol. 39 No. 38, Sept. 21, 1934. Based on data from 10 scattered states' industrial and agricultural, all east of the Mississippi and north of the Ohio, except Alabama and Arkansas.

It might, for example, be argued that because the new housing carried with it certain subsidies (which in effect is financial relief), the families within the projects probably receive more regular and larger amounts in relief than they received when in the slums or than was received by others outside the housing estates, and that this addition to income might have been sufficient to avert malnutrition, which might be assumed to account for the improvement. Probably the truth is that the improvement *was* due in part to a better diet; but it must be remembered that a fundamental element in the housing policy was the granting of subsidies which made possible a general improvement in living, including diet. So the credit must still go to the public housing policy.

There is abundant reason to believe that housing itself should be an important factor in bringing

[12] See Tables p. 372 in "Slums and Housing," Ford, op. cit.

[13] "U. S. National Committee on Law Observance and Law Enforcement," Geo. W. Wickersham, 5 vol., U. S. Gov't. Printing Office, 1931.

[14] See "An Analysis of a Slum in Cleveland," by Rev. R. B. Navin, with counsel of Howard Whipple Green, Cleveland Metropolitan Housing Authority, 1934.

about the improvements cited. Good housing eliminates the hazards of bad housing, which may include: inadequate protection from the elements, from disease-carrying rats, vermin, flies and mosquitoes, from fire and minor accidents (such as result from faulty stairs and floors), from disturbing noises during the night and day, from the lack of fresh air in hot weather and lack of sunlight, lack of sanitary facilities, from the over-crowding of rooms.[15] On such items, specific statistics cannot be gathered; but the hazards are none the less real, and we find health and well-being improved when the hazards are removed. "It is not necessary to establish a statistical relation between poor housing and poor health," states Dr. Murray P. Harwood, professor of bacteriology and sanitation at Massachusetts Institute of Technology, and he continues: "All that is necessary is to observe the intolerable conditions usually associated with slum dwellings."[16]

The data on the slum districts of Cincinnati and Cleveland show the preponderance of juvenile delinquency in slum areas. This is generally true in all cities — as you can see by the "spot maps" made by the Juvenile Court or one of its agencies in your own town. On the score of juvenile delinquency, the communities in the projects of our American housing authorities have, in their brief existence, made an almost perfect score. In a release of January 8, 1940, USHA stated that among 40,000 children in 25,000 families moved from sub-standard housing to 61 local housing authority projects the number of juvenile delinquents was virtually zero in 1940. In the first Stamford, Conn. project of 146 dwelling units, housing several hundred children, there had been no delinquencies since its occupancy in September 1937. "Liberty Square," Miami, with 243 negro families, holds a similar three year record; the same for the "Langston," in Washington, D. C., (for negroes)—over a two year period—while from the crowded areas of the same city came 72 per cent of all the city's juvenile probationers. Al Capone's old hang-out in Red Hook has been replaced by an open, wholesome housing project, with the usual improvement in delinquency. In all projects "traffic accidents and police calls are also notable because of their absence." The release cites other specific records for a number of cities scattered over the nation. It is true that the families in these projects are to some extent hand-picked, but that alone would not seem to account for so high a score.

*The Barrier of the Slums*

How do people come to be in slums? As we have previously pointed out: (1) some because of inferior education, and a lack of familiarity with American customs, (2) some because of mental or physical deficiencies, (3) some because of unfortunate events often beyond their control, (4) some because they were born there. But once there, all find themselves surrounded by environmental barriers. Our problem is to find ways of helping the various groups scale the barriers—or to remove those barriers.

As for those who are in the slums because of lack of education, many of them are foreign-born who have lacked opportunity[16a], [16b]. For them much can be done through adult education as conducted in a well organized public housing project. School training for the children is presumably comprehensively envisioned in the public school systems; but home training and adult education are not as yet comprehensively envisioned. The home training of children in slum surroundings is difficult and discouraging; in the organized housing project it is relatively easy. In these projects adult education of a very practical kind comes directly into the home, through household and family management as effected by the available guidance of trained social workers. It is extended into broader fields through various community groups and activities, through which enlightenment can be readily extended. A clinic in each project, as in New Haven, or a system of neighborhood clinics such as have been developed in New York City, besides furnishing direct aids to health, furnish another type of adult education of inestimable value.

That those having mental or physical deficiencies can be relieved by good housing is proven by the experience of the Dutch in their housing for the "undesirables." This shows that in Holland only about nine in each ten thousand of the population are in this group, and that, of these, 85 per cent within a few years graduate to normal housing, leaving about one and one-third families in each ten thousand who require a longer period or are incurable.

Among those in the slums who are physically unfit and those who are mentally unfit, there is, as the experience in Holland shows, a marginal group which includes many who might be fit in a thoroughly wholesome environment just as there are people who can live a normal life only in a winter climate as warm as Florida. On the physical side this is quite obvious in the case of those with respiratory troubles. On the mental side it is also obvious that unsanitary, inconvenient, gloomy, over-crowded living quarters are at best discouraging and demoralizing and at worst may

[15] For a more detailed statement see "Housing & Health Relationships Re-examined," by Bleeker Marquette in Public Health Reports, March 29, 1942, U. S. Public Health Service, Washington.

[16] "Public Housing," FWA, Washington, D. C., Vol. 1, No. 25, p. 2.

[16a] "A Tree Grows In Brooklyn," by Betty Smith, Harper & Bros., New York, 1943, is in essence the story of an immigrant family that for three generations struggled to rise out of the slums. While ostensibly fiction, it is a realistic portrayal of the barriers of the slums.

[16b] "Quicksands," by Mary Simkhovitch and Elizabeth Ogg, Row, Peterson Co., Evanston, Ill., is a shorter and more factual story of current slum life in Manhattan. It emphasizes the aids that come to slum dwellers through settlement houses, clubs for children and parents.

lead to quarreling, to drink or the use of narcotics, to sex excitation and promiscuity, abnormal pre-natal conditions and miscarriages, each and any of which may lead to mental strains and collapses.

The unfortunate events which can bring a family to the slums obviously are as varied as life itself—the shrinkage of earning capacity of the principal wage earner through ill health, advancing years, scarcity of work; or departure of one of the secondary wage earners; increase of expenses through larger families (more children or assuming the care of the older generation), through protracted illness of dependents, etc., etc. These factors may or may not affect the character of the mature members of the family. The adversities may be the fire which tempers the steel of character, or they may be the last straw which breaks the camel's back. In either case it is far better public economy as well as humanitarianism to remove as many handicaps as possible, including that of environment, in the hope of salvaging citizens, of keeping them out of more costly institutions and of forestalling more costly methods of family relief. To illustrate how this may work, look at a case in New Haven. "Because they could not adequately provide for their children, a man and his wife had their two boys placed elsewhere, and they could not get them back until they had a decent home for them. The father and the mother were rooming in the worst kind of place." The Housing Authority rented them a "1-bedroom unit to see how they would take care of the place. In contrast to their previous quarters, the new small apartment was immaculate." . . . "When it was evident that the family both could and would maintain a good home they were given a 2-bedroom unit and their children were allowed to be returned, saving a cost to the taxpayer and reestablishing a family."[17]

The experience of the British, as well as that of the Dutch, shows that about 95 per cent of those transferred to housing estates from the slums improve their way of living. As to the children, the citizens of the future, who probably approximate one-half the population, the experience in all countries is close to 100 per cent response to the better environment. *See Chapter on Housing in England, p. 56.*

Consider now those born in the slums, the children. Only in a narrow sense are children educated in schools. In the broader sense education comes from the contacts of life, for better, for worse. The home environment, when in a degraded slum; the play environment, when in the streets, in alleys, about the docks, dumps and railroad yards, each may teach lessons and establish habits which completely offset the school training. Under such conditions, as we have previously said, the school is playing in a game against loaded dice. The improvement which comes with improved environment is illustrated in the improvement in the London school children when placed in public housing estates, which we have earlier described, and is most dramatically and poignantly illustrated by the story which closes this chapter.

*Two Scientists Speak on Environment*

Discussing from a purely scientific point of view the effects of genetics and environment on society, Julian Huxley points out that in England, ". . . only about a third of the school children whose performance is in the top thousandth, come from the higher social and professional classes, while wage earners contribute 50 per cent of these children of exceptional intelligence. Thus our society is not utilizing the innate intelligence of its members as it might, nor does the system give adequate opportunity for intelligence to rise. . . ." . . . "Again, highly-strung types are less likely to achieve success in the lower economic strata, more likely to become neurotic and insane. People from the lower middle class who are apparently mentally deficient or abnormal have often reached their unfortunate condition because they have not had either the care or the opportunities for self-expression which would have been available in a more generous social environment." . . . "The fact that an undue proportion of artists, writers and scientists spring from the upper strata of society would not then mean that these strata were proportionally well endowed by heredity—merely that in the rest of society the Darwins and Einsteins, like the Miltons, were mute and inglorious." "We must therefore concentrate on producing a single equalized environment."[18]

From the psychologist's point of view, Dr. Arnold Gesell has this to say about the influence of environment and heredity. "Environment retains a critical role even though heredity sets meets and bounds." . . . ". . . the personality make-up is almost literally fabricated by the social conditions in which the young mind grows" . . . "the well-being of personality depends to a remarkable degree upon the impress of other personalities."[19] Thus the kind of citizen into which the child will develop, whether coöperative or uncoöperative, whether law-abiding or law-breaking, is inexorably influenced by the social environment and the personal contacts of early life. In the slums come almost inevitable contacts with gangsters and harlots, with the whole category of criminals and all those demoralizing influences to which we have previously alluded, in strong contrast to the conditions in large-scale housing projects.

Dr. Gesell also points out the importance of a wholesome early environment to democracy itself.

[17] "Then and Now," Fifth annual report of the Housing Authority of the City of New Haven, p. 19. A number of such cases are cited in the report, which incidentally is a most interesting statement of the managerial and social aspects of their problems.

[18] "Man Stands Alone," Julian Huxley, Harper & Bros., New York and London, 3rd Edition, 1941, pp. 60, 61, 69.

[19] "Infancy and Human Growth," By Arnold Gesell, Ph. D., M.D.; Directory Yale Psycho-clinic; Professor of Child Hygiene; Institute of Psychology, Yale University; New York, Macmillan Co., 1928, pp. 373, 374.

"The democratic spirit is the spirit of a slow growth which needs intelligent guidance long before the child enters school." "Overcrowding takes a terrible psychological toll." . . . "Much of the crime which even political democracies have not controlled has its roots in disordered homes which impoverish and distort mental development of future citizens. Here is another tangible task in preventive mental hygiene. How can Socicty enter upon this vast task, which if left undone weakens the foundations of democracy? By better housing. Also by steadily widening the infant health protection. . . ." "Science needs deeper applications to make democracy a more assured possession."[20]

*Kamala the Wolf Child*

In all the annals of science there is probably no more vivid and startling testimony to the influence of environment on human beings than in the narrative of Kamala, the so-called wolf child, as told by Dr. Gesell. At the age of about eight Kamala was found living in a wolf's den, with the pack; for the remaining nine years of her life she lived under the kindly roof of a missionary orphanage. When found, accustomed to hunting by night and to the dark of the den by day, "her eyes were bright and piercing, unlike human eyes": as the den had not permitted erect posture and possibly also from imitation, she went on all fours and ate her food by lapping it up. At first, after being placed in a human environment, there was a complete shunning of everything human, though her mentality appeared to be potentially normal, and through the persistent efforts of her benefactors and the changed environment she gradually approached human normality. "Not until a year and a half among the other children and grown-ups did she so much as stand on her knees; on two feet she never learned to run at all; on four feet she ran so fast it was hard to overtake her." But during that first year and a half she still "ate ravenously, rolled her eyes and made harsh sounds when anyone approached her while she was eating." Once on finding a dead chicken this child of nine, crouching on all fours, devoured it, feathers and all. At another time she was caught eating the entrails of a fowl which she had tracked down in the forest. After two years she again went prowling at night and howled like the wolves. After four years posture had not markedly changed, but speaking had begun—six words at the beginning of the year, and by the end of the year she was advancing by leaps and bounds." Then "her behaviour day" was comparable to that of the other children in the orphanage. She now preferred daylight to darkness, human beings to animals—and "was beloved by all the children."[21]

[20] "The Family on the Threshold of Democracy," Arnold Gesell, a paper read before the 1940 White House Conference on Children in a Democracy, reprinted from National Parent-Teachers, May, 1940.

[21] "The Biography of a Wolf Child," *Harper's Magazine*, January, 1941. This narrative has subsequently been expanded in book form as "Wolf Child and Human Child."

Here is another important point. With Kamala, in the same den, was a younger wolf-child, Amala, about a year and a half old when found. Being less set in her wolf habits, she adjusted herself to her human environment more rapidly than Kamala—though she lived but to the age of two and a half. Thus does the experience of Kamala and Amala testify to the power of environmental habits during the early impressionable years of development. Is it any wonder that in the degraded physical environment of our slums, the hang-out of criminals, there has been such a record of ever more crime, demoralization, and delinquencies?

The objective, the ultimate goal, of all public housing is to remove those demoralizing environments which now serve as an almost insurmountable hurdle to a large portion of the population, and to give them instead an environment which will free them to develop to their full capacity as producers and responsible citizens.

## Insufficient Family Incomes as They Affect Rents and Housing

*General Considerations*

To those families whose incomes are insufficient to purchase the necessities of life, others in the community make concessions or contributions, direct or indirect. This practice dates from earliest Colonial days and since then has been supported by various statutes, ordinances and regulations. Aside from public aid there has been private charity of various sorts, beginning with concessions by the landlord and the grocer, when these were kindly, and extending to the more prosperous individuals and to organized charities. More recently private charities have been grouped into community chests; and communities have further recognized their responsibility by expanding their *public* relief. More and more there is a growing sense of public responsibility for assuring *to all willing workers* the necessities for decent and wholesome living without the aid of personal charity. There is a growing sense that our social and economic structure should be adjusted so as to make these advantages available to all—as we have made education available to all through the public schools. Publicly organized housing is one aspect of this responsibility.

The following analysis of family incomes and budgets, particularly the ability to pay the rent necessary for good housing, leads us to the conclusion that, of the population now without any means of obtaining good housing, a much larger proportion should be provided for than has in the past been envisioned in the scope of housing agencies. This could be accomplished by broadening the base of public financial assistance so as to reach certain large groups not now reached, and this without any actual government outlay or subsidy as we have shown in the section on Housing Policy (p. 28).

In considering what families are to be aided by public housing there are a few simple facts to be kept

in mind. The ability to pay the rent necessary for good housing depends on two principal factors, (a) the family income, (b) the total expenditures needed for the wholesome and decent maintenance of the family, in other words for the annual family budget. When there is a deficit in such budget it becomes a matter of public concern, for it is the public that must meet the deficit. The extent to which the Federal and the local governments met this deficiency in the average USHA project is shown in Graph III, B.

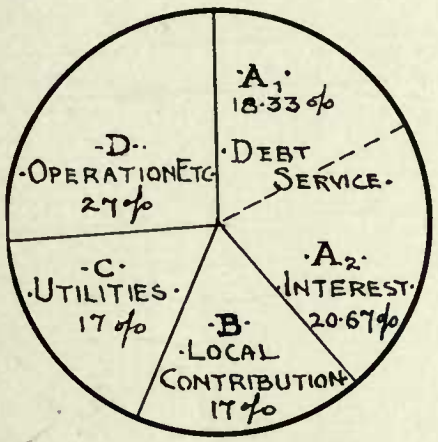
no change in the scale of living or in the amount of public assistance needed, if any. Conversely a lowering of wages with a corresponding lowering of the cost of living, would bring no change in the budgetary status.

For some years there has been a growing recognition of the need of greater steadiness, or security, of income, particularly by the wage workers and salaried workers, but also by investors. Insurance for unemployment and for old age symbolize the trend of greater

GRAPH III. ANALYSIS OF USHA RENTS

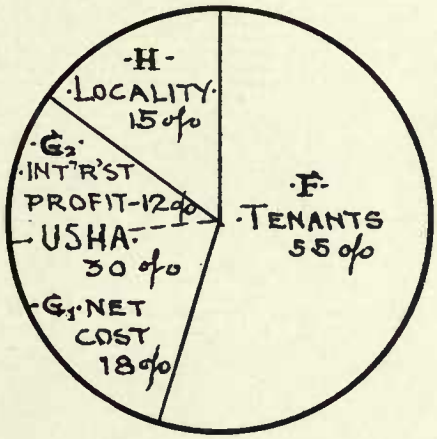
A. Breakdown of Costs
B. Amounts Paid by Tenants and Public

A. The Costs




| | PER CENT |
|---|---|
| A. Debt Service | 39 |
| $A_1$. Amortization 18.33 | |
| $A_2$. Interest 20.67 | |
| B. Local Contribution | 17 |
| C. Utilities | 17 |
| D. Operations | 27 |
| *Total* | 100 |

B. The Payments




| | PER CENT |
|---|---|
| F. Tenants Pay | 55 |
| G. USHA Paid | 30 |
| $G_1$. Net Cost 18 | |
| $G_2$. Interest Prof. 12 | |
| H. Locality Pays | 15 |
| *Total* | 100 |

Note: Data for the above is from (1) "What Does the Housing Program Cost?" USHA, p. 14; (2) "Questions and Answers", USHA, p. 22; (3) Letter from USHA, Nov. 12, 1940, giving breakdown of debt service.

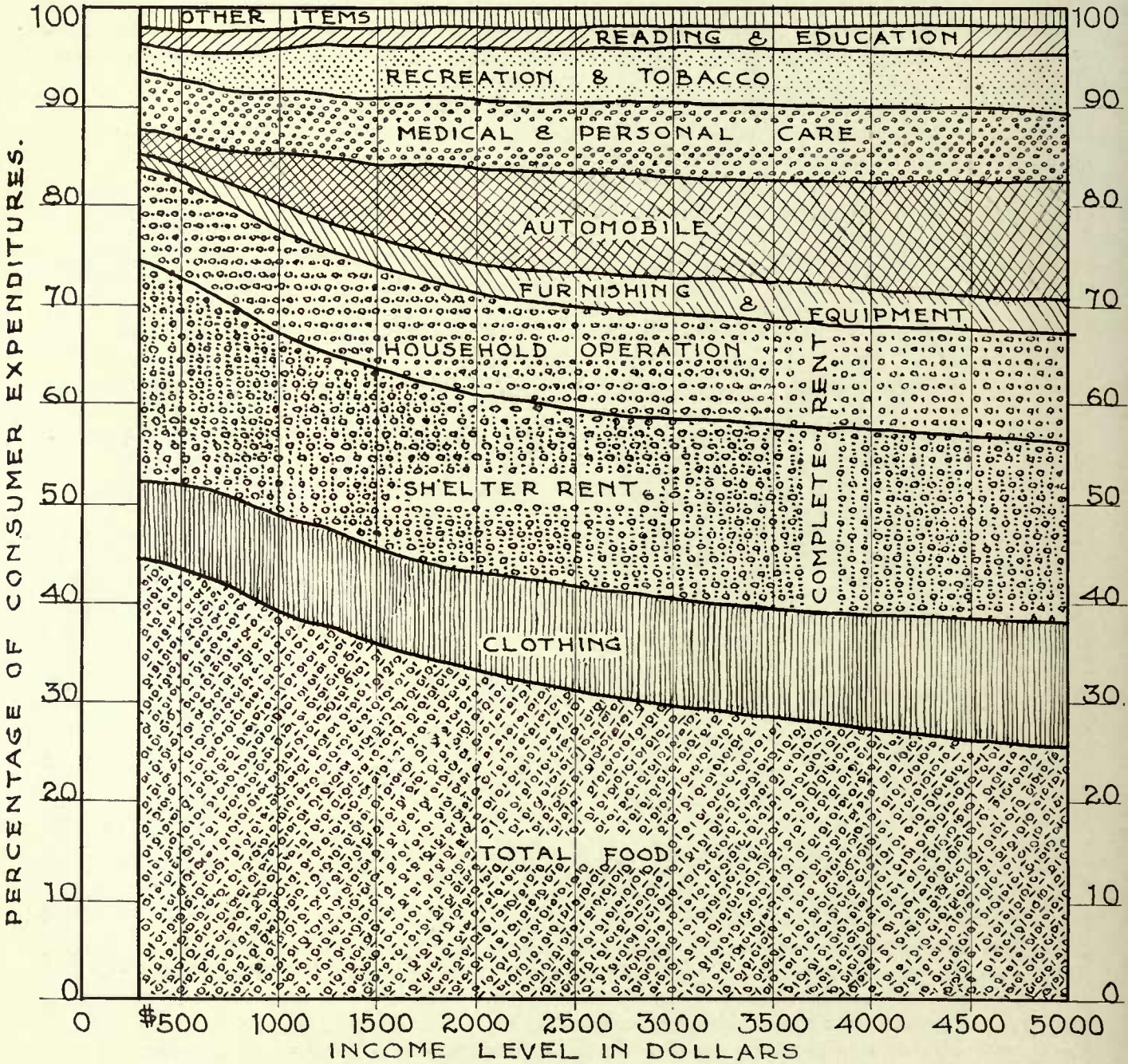
Obviously both the incomes and the expenses of families vary from time to time, due to a variety of conditions. First there is the number of workers in the family and the steadiness of their employment. Sickness, death, children coming to the age of working, others getting married, each may completely change the status of individual families. Then there is the wage scale and the cost of living. If the general family wage scale increases without a corresponding increase in the cost of living or without a decrease in the hours of employment, more families will be able to meet their family budget, fewer will need public assistance, whether for general relief or for housing. In any family an advance in wages quite obviously, *may* completely change the economic status; but if there is a corresponding rise in the cost of living there will be

security for the wage workers and salaried workers. Lower interest rate on mortgages, when better protected by adequate amortization and precautions against undue deterioration and neighborhood obsolescence, symbolize the trend in the investment field. This is well illustrated by the remarkably low interest rate accepted on the bonds of USHA-aided housing projects, which are exceptionally well secured as to principal and interest by the local and federal governments, as well as by prescribed amortization, and precautions against obsolescence, etc. The serial bonds of the New Haven Housing Authority in 1942 were sold at par with a yield of 1.8 per cent.

If industry could be kept moving on a more even keel over a long period of years, that too would add to the stability of the annual income of both em-

ployees and investors. That is precisely what the British accomplished when the government sustained the building industry by means of a long term housing wholesome housing without consideration of the income needed for all other items of wholesome living, is obviously a one-footed procedure. Next to food,

GRAPH IV. PROPORTIONAL DISTRIBUTION OF AVERAGE CONSUMER EXPENDITURES BY FAMILIES AT DIFFERENT INCOME LEVELS, 1935–1936*.




"Expenditures" as here used includes "relief", but not borrowed money. For the proportion of complete rent to total expenditures, including that of borrowed money, see Graph III, A.

"Edueation" includes tuition only—e.g. not room or meals at college. For further details of specific items see Table 5A: "Consumer Expenditures", op. cit. p. 78.

* Based on Chart VI, "Structure of American Economy", op. cit. p. 13

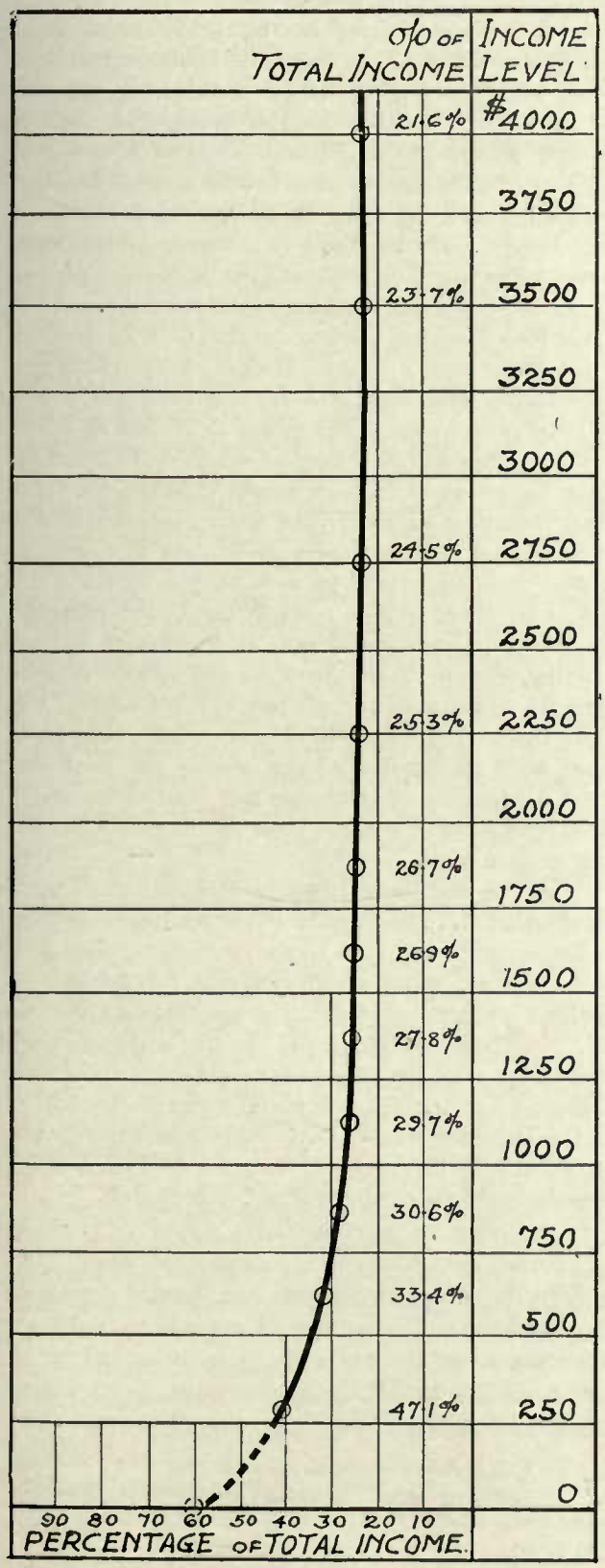
program. It is generally conceded that this was largely responsible for the successful manner in which the British came through the depression, as we noted in the chapter on "Housing in England."

To discuss the income needed for the rent of housing commonly bears hardest on the income. Also bearing hard on small incomes is medical care and sickness, to which bad housing may be contributory; as for clothing, up to a certain point the old *can* be patched and hand-overs *can* be made comfortable. The rela-

GRAPH V.—A

PROPORTION OF Complete Rent (Shelter and Household Operations) to Total Income Spent by Families in the United States at Certain Income Levels.

Based on Table 6A, "Consumer Expenditures in the United States—1935–36".



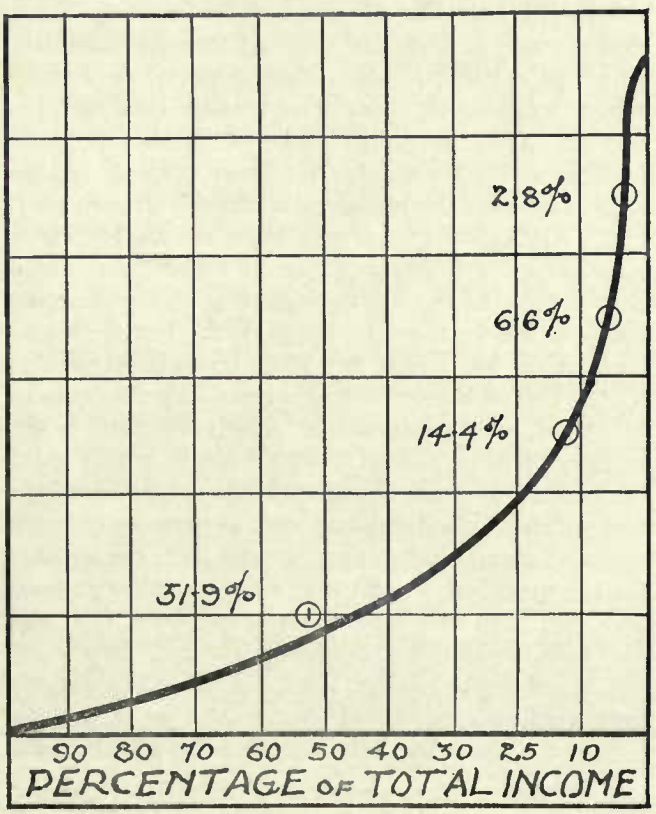

tive urgency of these necessities is vividly shown in Graph IV, p. 130, where you will observe that in the very low income groups the proportion of income spent for food and shelter rent increases rapidly as income decreases, while spending for household operations diminishes only slightly and medical care not at all. Obviously there should be a close coöperation between all public agencies which are concerned with direct or indirect financial aid to families. This question we will discuss more in detail in the following chapter on adjusted versus graded rents.

The large proportion which *complete* rent takes out of the total income is shown here in Graph V A, where the curve shows that among incomes below $500 the average cost of complete rent is 47.1 per cent of the total income, or nearly two and one-half times the average of the basic percentage recognized in the United States Housing Act of 1937, which is something less than 20 per cent of the total income as an average for families large and small. For incomes around $2500 the graph shows that complete rent in the entire country, in both urban and rural areas, averaged 25 per cent of the total income, still appreciably above the 20 per cent base. This percentage would be higher if the graph were for the urban group alone.

GRAPH V.—B

PROPORTION OF INCOME Deficits (Debts or Relief) to Complete Family Budgets by Families in the United States at Income Levels between 0 and $1500.

Based on Table 1, "Consumer Expenditures in the United States—1935–36".



The extent to which family incomes were insufficient to meet family expenditures for current needs in the year 1935–36, is shown in Graph V B. These deficiencies represented either debts or relief. It seems reasonable to assume that the population having the deficits was for the most part living in slum conditions, and in extreme slum conditions in the lower income levels of the curve—under $750 and to a greater degree under $500. The curve represents the condition in the years 1935–36, which, while still to some extent under the influence of the depression, was on the whole probably fairly close to normal conditions—as we have previously pointed out. The figures of the 1940 census indicate that only a small proportion of the slum housing had been vacated. It must also be kept in mind that the curve is based on *average* conditions over the entire country and in communities with different densities of population—but more of that later.

*What Income is Needed to Pay for Wholesome Housing?*

The full question is, What income is needed to pay for housing and all the other necessities of living? Looking at Graph V B we note that income deficits for the average family disappear between the income levels of $1250 and $1500, and that in the income group above these levels for the average family the income is sufficient to more than pay for all needs and, looking at Graph V A we see that at these higher levels the complete rent ranges from about 26.9 to 23.1 per cent. These averages are for families of all sizes, in communities of all sizes, both urban and rural in all parts of the country in the year 1935–36. We will now consider the income needed for rent in the urban areas, and later that in the rural areas.

First what is the range of incomes in USHA aided projects? For the smaller families only those having incomes not more than 5 times the scheduled rents are eligible; for the larger families, only those having incomes not more than 6 times that rent are eligible. Thus the upper range of incomes of those families which are eligible for those projects can be arrived at from the actual rents charged in such projects. At the lower level only those are eligible whose incomes are sufficiently secure to make them sound risks as tenants, and it is their incomes which determine the lower income range for the project. But the actual rents at the lower level and at all levels is determined by the cost of operating and maintaining the units to be rented, less the amount of subsidy allocated to the building unit or family. Within limits legally fixed by the U. S. Housing Act of 1937, the proportion of the rent which is subsidized may vary as between different projects; also, within any given project, the subsidy for any given size of unit may vary according to location, etc. (*e.g.*, whether on first or top floor, etc.) and also with the ability of the family to pay. In a bulletin issued in December 1940, the USHA suggested rents grading from 19.8 per cent to 31.8 per cent of the income.[22] The immediate object of this was to make it unnecessary for a family to move whenever there might be a fluctuation of its income, but another result has been to increase the range of incomes within the projects.

Let us now find the upper range of actual incomes. During the period just before the defense program jarred the more normal economic balance, the upper range of complete rents, as actually scheduled in projects all over the United States, varied from $10 per month in the smaller cities of the south and midwest to $14 in medium-sized cities, $22 in most large cities,[23] and $27.05 for a five-room apartment in Red Hook, one of Metropolitan New York's more economical projects.[24] On the island of Manhattan the low for any apartment in Vladeck Federal Housing is $24 (implying an income of $1440 for a small family); the high is $35 (implying an income of $2520 for a large family). On the basis of the basic USHA ratio of rent to income (*i.e.*, 1:5 and 1:6) the income needed for a rent of $10 per month or $120 per year, is $600 a year for a family of the smaller size; $720 for families of the larger size; a rent of $14 per month ($168 per year) means incomes of $840 for small families, $1008 for large ones; a rent of $22 means an income of $1320 to $1584; while $27.05 a month for a Red Hook family of the "large" size means an income of $1948, but for a family requiring six rooms, the required income would be $2397; for a large family in Vladeck it might be $2520. It is important to note that in order to be eligible for these specific rents in the USHA projects, the family incomes could not, at the period we are studying, exceed these figures for the several groups. Thus for families in various parts of the nation, the *upper* range of the subsidized rents would vary from about $600 for families of the smaller size to about $2000 for families of the larger size, and up to about $2400 and $2500 for extra large families in a certain metropolitan area.

As for the lower range of incomes, the USHA reports that ". . . southern workers who earn *as little as* $6 per week are able to move their families into USHA homes, while weekly payrolls for families in northern projects average in some cases as low as $12."[25] (Italics are ours). If the pay came in every week of the year, the $6 payroll would mean an income of $312, while the $12 one would mean an income of $624. These figures may be taken as approximately the lower limit of the range of incomes in USHA-aided projects in the types of communities indicated.

Averages or generalizations based on nation-wide figures have limitations in their application; they do help, however, in grasping the general situation. Thus, looking at the country as a whole we see that, depending upon its size and where it is located, a family can live in USHA-aided housing, and presumably have the other necessities of life, on incomes from

[22] "Income Limits and Rents in USHA aided Projects." Revised December 14, 1940, FWA-USHA Washington, D. C., p. 7.

[23] *USHA Release* #424, January 16, 1939, p. 4.

[24] "Adjusted Rents," Committee on Housing, Community Service Society, 105 E. 22nd Street, New York City, December 14, 1940, p. 2.

[25] "*Public Housing*," USHA, November 12, 1940, p. 1.

$312 to $2500. In the first 16 projects finished, the average incomes ranged from $545 in the smaller communities to $1060 in the largest cities.[26] Looked at more in detail, the larger portion of all these incomes lie in the range of $500 and $1200.[27] The relation of these income groups to the general urban population is shown in the curve of Sub-standard Housing (*Graph IX, p. 142*) of which more later. It is important, however, to bear in mind that variation between the high and the low incomes in each of these three groups is due not only to the size of the family, but to the size of the community in which it lives and to the cost of living in general, and in particular to the cost of housing in each community; obviously variations are due also to the wage rate, which varies roughly with the cost of living. Each local housing authority has or should have its own figures based on the specific local conditions.

*What Groups were Excluded from USHA Projects?*

Since those families whose incomes are not fairly secure are not eligible to the subsidized housing in the USHA-aided projects, they must accept such old housing as the market affords and pay the market prices, which may be and often are higher than in the authorities projects. These we will designate the "C's," who for their sub-standard housing must set aside for rent an abnormally large proportion of income, leaving a shortage for other necessities. Practically all, if not all, that portion of the population with income deficits greater than 25 per cent (which has incomes less than $400) as shown in Graph V B, would be in this group. From another angle, also presumably in this group are not only all or most of those with incomes below $312, the minimum income in USHA projects in the smaller southern and midwestern communities, but also those with incomes below $624 in the average project in the north; most of those with incomes less than $1320 in larger cities and those in Manhattan with incomes less than $1440. *See area "C," Graph IX, p. 142.*

Just *above* the group eligible for USHA-aided housing are two other groups for whom good housing is not available, whom we are designating as the forgotten "A's" and "B's." These are those whose incomes are more than 5 or 6 times the rents charged in USHA projects, yet not sufficient to pay full commercial rents.

There is a wide gap between the rent paid in USHA and FPHA projects and those paid for comparable housing in the open market. In USHA-aided projects the rent paid by the tenants is only 55 per cent of the actual cost of rent, without profit; the other 45 per cent is being paid by Federal and local subsidies, as illustrated in Diagram B of Graph III. So if the full cost rent had been charged, to the 55 per cent paid by the tenants there would be added the extra 45 per cent covered by the subsidies. This would have meant an increase over the average rents of a little less than 82 per cent (*i.e.*, 45/55). Obviously such rents could have been paid only by tenants with income about 82 per cent higher than those paying the subsidized rents. If the subsidy were uniform for all rents or all families in USHA-aided projects, then this 82 per cent would measure the theoretical gap between incomes required in such USHA housing and in similar hypothetical projects in which the rent charged for a similar unit would be the cost rent. *See Table XVI, Col. A, 9b and 7, p. 134.* Since rent in such hypothetical projects would not include a profit, these families could not pay for commercial rent for equally good housing, and therefore would, to a large extent, be thrown back on sub-standard housing. From the foregoing figures we find that to live in such hypothetical projects would require incomes from about $558 to $3368 for families of varying size in various parts of the nation—this as against $312 to $2400 in USHA-aided projects —based on "complete rents" (*i.e. including utilities*). This group, which could pay the rent in a USHA project, we are designating the B's. Between these and those who could pay the going commercial rent, there is yet another group living in substandard housing, a group which we designate the A's.

To provide housing for some of the C's and for the B's the USHA in its latter years recommended a greater diversification of the subsidies, more at the bottom and less or none at the top. *See Graded or Adjusted Rents p. 138.* But the A's remain to be provided for. The gap between the income level of the A's and of those in equally good commercial projects can be measured approximately by the gap between the incomes of those in Vladeck Federal Housing and Parkchester—though some allowance should be made for the somewhat better buildings in Parkchester. Incomes in Vladeck vary from about $1440 to $2520, in Parkchester from about $2160 to $5400, computed on the basis of incomes being 5 and 6 times rent, and adjusting the Parkchester rents to include the utilities. Housing built and operated on a mutual or coöperative ownership basis would bridge this gap. We have seen how this was done in Holland, in Sweden, and in Denmark. In Table XVI, p. 134 and the legend accompanying it we show how this could be done.[27a, b]

How large may be the B group, which could pay the cost rent, or the A group which could pay the commercial, we cannot determine as yet from nation-wide figures. However, in three somewhat diversified

[26] "What Does the Housing Program Cost," USHA, 1940, footnote p. 11.

[27] "*Public Housing,*" Four Years of Achievement—1937–1941, FWA, Washington, Table of Low Incomes.

[27a] "Housing Costs"—NHA, Washington, D. C., 1944, p. 47–48, gives tables showing the effect of a 20% reduction in various items.

[27b] "Cost Measurements in Urban Redevelopment" by Miles L. Colean and Arthur Davis. National Committee on Housing, 512 Fifth Avenue, New York (18), N. Y., May 1945—deals with the major items of finance for single family and multi-family houses in rows and in apartments up to 12 stories high, based on certain site and unit plans. The costs are in the form of charts and tables.

TABLE XVI. ELEMENTS OF THE ANNUAL RENT OF A $4500 UNIT (A) UNDER DIFFERENT FINANCING, AND THE INCOME NEEDED FOR THE RENT

| Items | A [2] | | | B | | | C | | |
|---|---|---|---|---|---|---|---|---|---|
| | USHA Finance 60 yrs. etc. | | % of line 7 | Private Finance 60 yr. loan | | % of line 7 | Private Finance 27 yr. loan for 33⅓% of capital | | % of line 7 |
| 1. Amortization | @ 1.41% | $63.5 | 18.33 | @ 1.41 | $63.5 | 14.4 | @ 3.7% | $166.0 | 33.8 |
| 2. Interest | 1.59 | 71.6 | 20.67 | 2.50 | 112.5 | 25.4 | @ 4% [2] | 60.0 | 12.2 |
| 3. Debt Service | @ 3.00% | 135.1 | 39.00 | 3.91 | 176.0 | 39.8 | | 226.0 | 46.0 |
| 4. Operation | | 94.5 | 27.00 | | 94.5 | 21.3 | | 94.5 | 19.2 |
| 5. Utilities | | 59.0 | 17.00 | | 59.0 | 13.4 | | 59.0 | 12.0 |
| 6. a. Reduced Tax | @ 1.31% | 59.0 | 17.00 | @ 1.31% | 59.0 | 13.4 | @ 1.31% | 59.0 | 12.0 |
| b. Balance of tax | | | | @ 1.19% | 53.5 | 12.1 | @ 1.19% | 53.5 | 10.8 |
| 7. Cost Rent—4½ Rms. | | $347.6 | 100.00 | | $442.0 | 100.0 | | $492.0 | 100.0 |
| 8. Profit or Subsidy (S. @ 45% = | | 156.4 | | @ 2% | 90.0 | | @ 5% [3] | 150.0 | |
| 9. a. Commercial Rent | | | | | $532.0 | | | $642.0 | |
| b. Subsidized Rent | | 191.00 | | | | | | | |
| 10. Required Incomes | @ Subs. rent | | @Cost rent | @ Cost rent | | @Profit rent | @ Cost rent | | @ Profit rent |
| a. 2 Rms. @ 5 times rent | $420 | | $770 | $980 | | $1180 (1020) | $1093 | | $1430 |
| b. 5½ Rms. @ 6 times rent | 1410 | | 2586 | 3290 | | 3980 (3339) | 3672 | | 4800 |

*Legend.* This table serves several major purposes: To show (1) The gap of No Man's Land which exists between (a) the rents and the family incomes needed in public housing (specifically under USHA, shown on line 7 and on 10 a and b under Column A; and (b) the lowest rents and incomes which we can hope to reach in the near future by identical housing privately financed for profit, shown on lines 8 and 10 a and b, second sub-columns under B and in both sub-columns under C. (2) That the gap of No Man's Land (*e.g.*, between $2585 and $4800 or even $3980, lines 10a, 10b), can be bridged more than half way by the same type of housing if operated *without* profit, as in a mutually owned or coöperative project. (3) That if private enterprise, whether for mutual ownership or for investment, is going to bridge the gap of No Man's Land, the period of amortization will have to be long and the interest on the capital low. (4) That construction costs must also be kept low, since all of the component items of the rent, except operations and utilities, are based on these costs; the total of such items being 56% of cost rent under A, 65% under B, and 69% under C.

*Notes.* (A.) $4500 approximates (actually it exceeds) the average cost of a family unit in USHA projects during the relatively normal period of 1937–1940 (inclusive), including the pro rata of all land and its development. While this is a nation-wide average for all units large and small, the per cent column makes it easy to compute the component items for a unit of any cost. For a breakdown of the cost of rent in the average USHA project, see Graph III, A, p. 129.

1. *Amortization.* In case of financial institutions supplying their own capital, this item would not be needed, and the rent would be lowered to that shown in parenthesis, Column B, lines 10a, b.

2. *Interest.* In Column B there is included a "mutual insurance" fee of ½% (the rate obtaining under FHA), and 2% for interest on bonds to supply working capital (a rate appreciably higher than the interest on public housing bonds in these recent years of an abundant supply of capital). In the case of coöperative housing for purposes of simplification it is assumed that whatever equity might be supplied by the owners would bear the 2% rate. In case of large financial institutions, such as insurance companies, having their own funds to invest, this 2% would be a return on the investment, to be added to item 8, making a 4% net return. (See note 9).

4. *Operations* include maintenance and a fund for partial obsolescence.

5. *Utilities* covers the cost of producing or purchasing water, heat, gas, electricity, etc. at wholesale and distributing them to the tenants, the cost being included in the rent.

6. *Taxes.* Item *a* is the reduced taxes, or payment in lieu of taxes, in USHA projects, amounting on the average to 1.31%. In Columns B and C is shown an extra item *b*, sufficient to bring the total to 2½%, that being assumed to be sufficient to cover the normal tax in a community of average size.

7. *Cost Rents.* This is for a $4500 unit, presumably the average of all rents in the project. That shown in the first sub-column under B is that which would be available in coöperative or mutual housing projects on a large-scale or part of a national system, while that shown in the first sub-column under C is that which would be available to them in relatively small independent projects. Figures in the second sub-column under C seem to tally closely with the rents which would result in most of the projects of the City and Suburban Homes Co. (see p. 174) if these were to include the same utilities, large open spaces and community facilities.

8. *Profits or Subsidy. The subsidy*, under A, is the average subsidy which obtained in the average USHA project; during the period of high war earnings this figure diminished appreciably; but, with the wider range of incomes made possible by the adjusted rent policy of FPHA, a similar average subsidy might be expected to continue in normal periods—thus rents might range from those of relief families able to pay less than former minimum rents under a project average of $955 to those who could pay the higher rents in a project with average cost of $2085.

9. *Profits.* In the case of housing built for investment, to the profit shown under B should be added the net interest of 2% shown on line 2—as explained under Item 2. Under Column C is shown the financial breakdown under a limited dividend company operating on approximately traditional lines (see pp. 173–175). It is assumed that two-thirds of the capital is supplied by common stock to yield 5% and one-third by mortgages at 4%.

10. *Required Incomes* are based on the assumption that obtains in public housing, namely that a family with not more than two children can allot one-fifth of income to rent, a family with three or more children can allot one-sixth. The figures in parentheses, second sub-column under C, in the case of large financial institutions using these funds result from omitting the amortization items. (See Item 1.)

subsidized projects studies were made of the population to be housed and the number and proportion of those who were ineligible because of high incomes was determined. Thus, because of high incomes, in the Corlears Hook area, a densely populated district of Brooklyn, of all the families in the slum clearance site, 20 per cent were ineligible, and of the 29,000 families living in sub-standard housing in Pittsburgh, again 20 per cent were ineligible because of high incomes; while in South Jamaica (which is virtually a suburb of Brooklyn) 28.5 per cent were thus ineligible.[28] The higher figure for Jamaica is what we should expect, considering that while the land and the type of housing here were more economical than in the central locations, the wages in most cases would probably be the same as those of the workers in the denser Corlear's Hook area. Pending further data, therefore, we shall use 23 per cent (average for the three projects) as representing the proportion of both B and A groups to the total population in sub-standard housing.

*Exploring the Areas of Sub-standard Housing*

The foregoing study of the USHA projects has, we hope, thrown some light on the incomes of occupants of sub-standard dwellings and on the minimum incomes needed for living in standard dwellings. These incomes will, of course, be greater in large cities than in small ones, greater in northern cities than in southern cities where the cost of land and building is less than where heating systems are not required. Nevertheless, if we compare the overall pattern of the distribution of sub-standard housing in the various income strata with that of standard housing for the same and higher income strata, we throw further light on the general question and also on the specific question of how future public housing may best be distributed in relation to the income levels—even though the pattern be only an approximate estimate, based on a rough reconnaissance survey. Such an estimate is presented in Graph IX, p. 142, with the methods of plotting explained in the legend accompanying the graph. The total amount of sub-standard housing is not radically different from the estimate that "one-third of the nation is ill-housed." Aside from the fact that the estimate is based on more specific data, an important difference is that the sub-standard dwellings are here apportioned to the various income strata.

The statement that "one-third of the nation is ill-housed" seems to have been based on the fact that the census of 1935–36 showed that one-third of all families (*exclusive* of those on relief) had incomes less than $1450,[29] an income which, under average conditions in the nation, was considered insufficient to afford good housing together with all the other necessities of life. Also the "Real Property Inventory in Metropolitan Areas, 1934" had indicated a large proportion of obsolete houses, with inadequate sanitary facilities, in a bad state of repair, and with a considerable proportion of room over-crowding; but the inventory gathered no information as to site over-crowding, or room over-crowding. As to the data on the condition of the structures, the editor of the inventory states: "the enumerators naturally formed their judgments in accordance with the standards of the communities in which they worked. . . . The tables therefore cannot be made the basis for mathematical comparisons, since the standards in one city may not exactly conform with those of another."[30] The data in the Inventory are not all classified by income levels, so altogether it is not in itself adequate for mapping the area of sub-standard housing.

The making of such comparative patterns involved setting up some kind of standards for good housing. From a broad point of view, *standard* housing may be said to be that which conforms to the standards set forth in Basic Principles (by the American Public Health Association), while that which falls below these standards is *sub-standard.* This was the standard adopted in our estimate, with the further assumption, however, that any housing now below these standards but capable of being brought up to them by minor repairs or renovation, would be considered as standard.

While the areas into which the total urban population is subdivided on the graph are merely estimates, not to be interpreted too precisely, nevertheless, it helps to visualize some interesting conditions—such as the preponderance of familes in the lower income level. Also it serves as a framework of reference for other facts about the distribution of incomes. Since incomes are lower in the South than in the North, and lower in small communities than in large, a large part of the population in the lower area of the chart area is made up of those living in the South and in small communities, and conversely, too, the larger part of those in the upper income area are in the North and in the larger cities, and also, the intermediate area is made up of those in small cities and cities of medium size, both North and South. In the same way this holds true for each income stratum, going from left to right—more of the families which can best meet their budgets on a given income are in the South and in small communities.

Furthermore, the several areas embraced within T-T are not fixed. As obsolescent dwellings become absolutely obsolete and sub-standard, the curve S-S tends to move to the left; as sub-standard houses are replaced by standard houses S-S tends to move to the right. If federal agencies assisting private enterprise were to make loans available on any easier terms, the area of "C" would tend to extend to the left to include more of each income stratum, and to extend into lower income strata—as it has done in England, Holland and France. To the extent that the projects aided by

[28] "Adjusted Rents," op. cit., p. 4 to 7.

[29] "Consumers' Incomes," op. cit., Chart 1, p. 9.

[30] "Real Property Inventory," 1934, Summary of Sixty-four Cities combined, Department of Commerce, Washington, D. C., p. 11.

FPHA (supplanting USHA) grade their rents toward full cost at the upper level and toward full subsidy at the lower level, to that extent the area of D tends to spread into B and A at the upper levels and into C at the lower level.

*Other Estimates of Substandard Housing*

A brochure entited "a method of analyzing the economic distribution of shelter" (*sic*)[31] gives us an equation and, based upon it, a chart for determining the percentage of families able to afford shelter at a given cost and subject to given charges. In an appendix are charts showing the distribution of incomes by (1) size of families, (2) size of communities and by regions—both based on tables in "Consumer Incomes —1935–36." These charts may prove useful to local authorities in analyzing their population problems.

In discussing the post-war need for more housing, Miles Colean suggests that perhaps as much as one-fifth of the total supply of housing, both urban and rural, is deteriorated and outmoded and for that reason alone due for replacement[32]—on these grounds, of the 37,000,000 dwellings indicated by the census of 1940, 7,000,000 would be due for replacement. Our estimate of substandard houses (based on standards of hygiene rather than of age and upkeep) is 7,830,000 in the urban areas alone. For this estimate, there is this to be said: it is limited to the urban population and is broken down into income strata, in regard to which we have the data which are given in the legend of the graphs.

In addition to the 7,000,000 family units needed for replacement, Mr. Colean estimates that in 1942 we were behind in our normal production by 1,000,000 and that each year a new demand of 420,000 units is created by the increase of population. With these figures in mind, Mr. Colean estimates that during the next decade the country could absorb anywhere from 900,000 to 1,200,000 dwellings a year, the bulk of which would be for those in the lower income bracket. In 1944 a figure frequently used was $1\frac{1}{2}$ million units annually for 15 years.

In 1945, "The National Housing Agency estimates that during the first post-war decade an average yearly construction of 1,260,000 nonfarm dwellings will be required. Construction during the period 1920–29 averaged 700,000 units annually. In the peak year 1925, a total of 937,000 units was built. This estimate of annual post-war need is based on a requirement of 410,000 units per year for increased families, 140,000 units per year for returned married veterans, 80,000 units a year for those families now jointly occupying homes and to establish a normal vacancy reserve, and 630,000 units per year to replace substandard dwellings and those destroyed by fire, storm or other disaster."[32a]

*In the Rural Areas*

In the rural areas the relation between rent and cash income is quite different from that in urban areas. This is due to the fact that to a large extent rural families, even those in the "non-farm" group which live in communities of less than 2500, get much of their subsistence from the land, and so need much less cash. But that insufficient incomes are prevalent is evident from the fact that in 1935–36 about 38.2 of all families in the rural areas were on relief,[33] this despite the fact that some distressed rural families, about 20 per cent of the total, had migrated to the cities in large numbers, thus reducing the proportion of rural families to the normal rural population and increasing that of the urban population. Incidentally, this 20 per cent seems to have returned to the rural areas, as indicated by the 1940 census, in which the proportion of urban to rural population is about the same as in 1930—*i.e.*, 56.5 to 43.5, as shown in Graph II A, p. 119.

Though the population of the farm and the non-farm rural areas was about equal in 1935–36, about two-thirds of the relief cases were in the non-farm areas, where most of the part-time farm labor lives. As to the actual proportion of rural families living in sub-standard houses, expert observers in this field hold different opinions. The President's Committee on Farm Tenancy reported in 1937:[34] "The extreme poverty of *one-fifth to one-fourth* of the farm population reflects itself in a standard of living below any level of decency." However, a report in 1938 said:

"It is a conservative estimate that *one-third* of the farm families of the nation are living on standards of living so low as to make them slum families."[35] (Italics are ours). In 1934 a sample survey of the farm housing conducted by the Department of Agriculture showed that a very high percentage of farms were without modern conveniences—without indoor water 69.8 per cent, without built-in bath tubs 88.8 per cent, without indoor toilet 91.5 per cent, without electricity 82.2 per cent; but the report is lacking in a statement of the standards that definitely determine unsanitary conditions. No less an authority, however, than Dr. Edith Elmer Wood estimates that at least two-thirds of the farm houses are sub-standard.

Dr. Wood's figures raise an interesting question of standards. Her figures are based, apparently, on the assumption that farm houses lacking indoor water

[31] By John Burchard with the help of William E. Haible, Margaret Hopkins, Doris Meyer, and Harry Weese. The Albert Farwell Bemis Foundation, Massachusetts Institute of Technology, Boston, 1940.

[32] "The Role of the Housing Industry" (in Building America series), by Miles Colean, National Planning Resources Board, Washington, July, 1943. Also in "American Housing," The Twentieth Century Fund, New York, 1944, p. 5.

[32a] "Problems of Mobilization and Reconversion, FIRST REPORT, to the President, the Senate and House of Representatives" by the Director of War Mobilization and Reconversion, Jan. 1, 1945. U. S. Government Printing Office, Washington, D. C.

[33] "Consumers' Incomes," op. cit., Table 27 B, p. 102.

[34] Prepared under the auspices of the National Resources Committee, U. S. Government Printing Office.

[35] "Disadvantaged Classes in American Agriculture," U. S. Department of Agriculture, U. S. Government Printing Office, 1938.

facilities are substandard.[36] While indoor facilities add to the convenience and efficiency of housekeeping and would seem to be a desirable goal in new structures and in the modernization of the old, it must nevertheless be recognized that in rural areas having only outdoor water and sanitary facilities does not necessarily imply unsanitary conditions, such as result among city tenements from lack of privacy and lack of responsibility for sanitary upkeep of outdoor facilities, or even indoor facilities, used by several families in common. In rural areas it is not unusual for families of culture to put up with facilities which are relatively primitive, yet kept in a sanitary condition. The most common unsanitary condition in rural areas probably arises from contamination of water supplies, often because of leaching cesspools and surface privies.

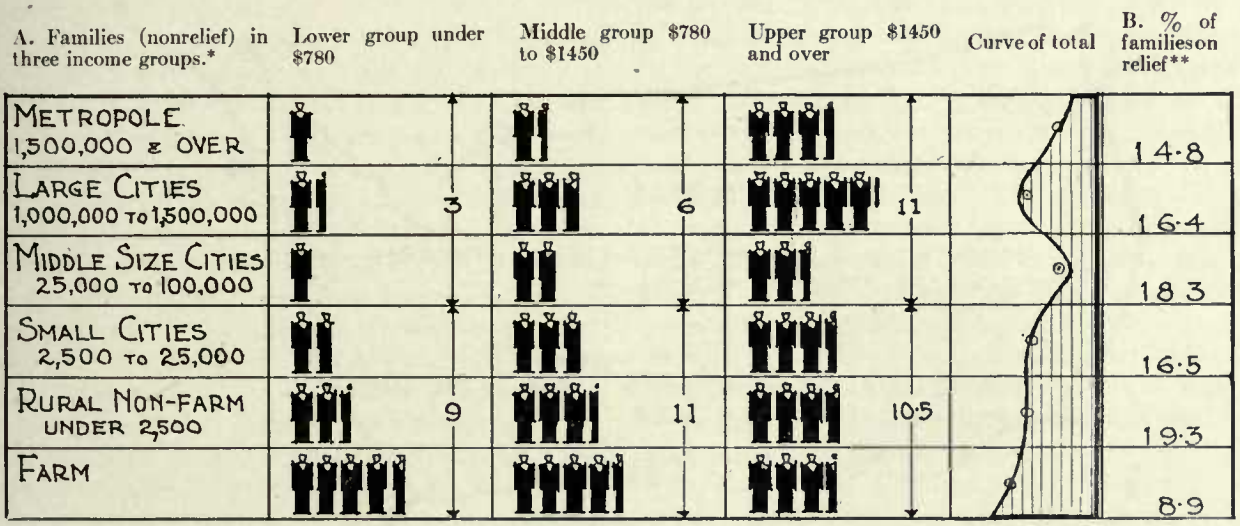
TABLE XVII. AVERAGE INCOMES OF FAMILIES IN FIVE GEOGRAPHIC REGIONS,* BASED ON SAMPLE DATA, 1935–36

| Region | Average Income Per Family | | | |
|---|---|---|---|---|
| | Median | | Mean | |
| | All families | Nonrelief Families | All families | Nonrelief Families |
| New England | $1,230 | $1,365 | $1,810 | $2,011 |
| North Central | 1,260 | 1,410 | 1,786 | 1,973 |
| South | 905 | 985 | 1,326 | 1,431 |
| Mountain and Plains | 1,040 | 1,220 | 1,363 | 1,537 |
| Pacific | 1,335 | 1,485 | 1,773 | 1,937 |

The nonrelief group excludes all families receiving any direct or work relief (however little) at any time during year. For further explanation see "Consumer Incomes," Appendix A, p. 42.

* "Consumer Incomes in the United States," National Resources Committee, August 1938, Table VI, page 22.

GRAPH VI. DISTRIBUTION OF FAMILIES IN 1935–1936 BY TYPES OF COMMUNITIES.




Each figure represents 500,000 families.

*Based on Graph 9, "Consumer Incomes" op. cit.

**Based on Table 9a, Ibid.

But these are conditions subject to inspection by the State Health Department and are more readily corrected than similar conditions in the cities, and the mere existence of leaching cesspools or even surface privies does not imply unsanitation.

*Variation in Incomes by Regions and by Type of Communities*

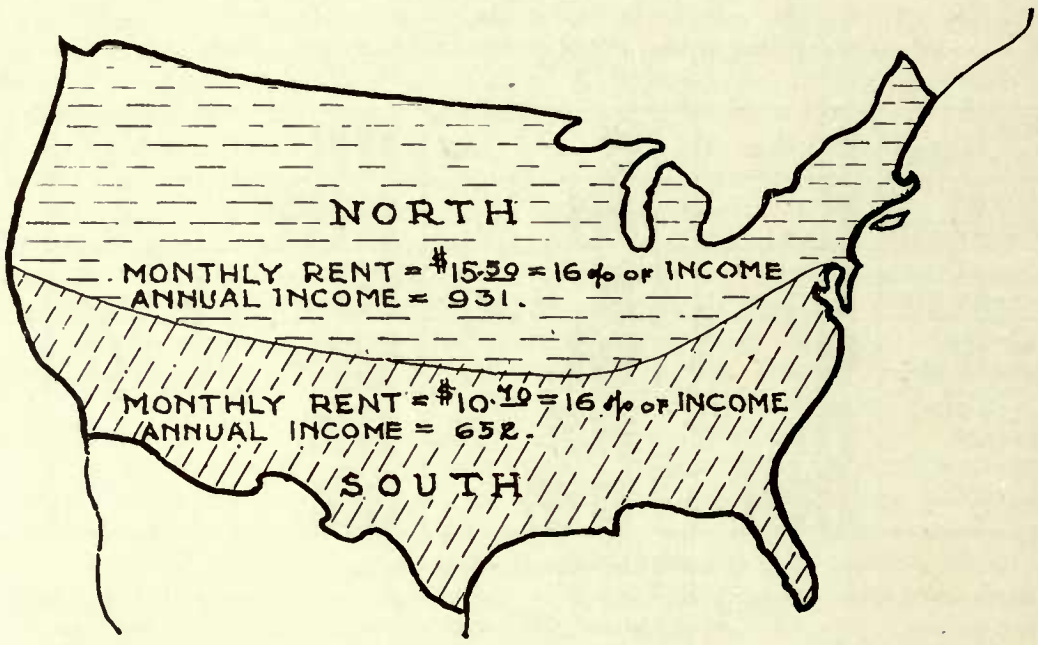
In connection with this entire discussion it is important to emphasize again the limitations in the application of the data and the fact that incomes, the cost of living and the cost of housing vary from the rural districts through the small cities to the large cities, and that they vary from north to south and east to west, so that the figures for population and for family income and expenditures based on the average of the country as a whole may not apply to any particular locality, and the figures of one locality may not be applied to another. A glance at Table XVII will show how true this is in a larger geographical way. There is a 20 per cent difference in building costs between Boston and Worcester, which are only 45 miles apart. We have previously noted that for the entire country rents are higher in the North than in the South, but that because of a similar variation in costs the ratio of rent to income remains about the same. *Graph VII, p. 138.*

How are these various incomes distributed among the farms, villages, and cities, large and small? This is shown for the year 1935–36 in Graph VI, where it will be noted that: (a) the largest proportion of families with incomes below $1450 were in the farm and rural non-farm areas, smallest proportion in the metropolises; (b) that about two-thirds of the families with incomes below $1450 were in the small cities (2,500 to 25,000); (c) that the largest proportion of families above $1450 were in the large cities (in excess of 1,000,000); (d) that the proportion of insufficient incomes, as indicated by relief, was greatest in the areas of farms and large cities.

[36] "Introduction to Housing," U. S. Housing Authority, 1940, p. 19.

The foregoing discussion, we hope, may help to emphasize the importance of thorough local population surveys in connection with housing activities. Such changes as took place in the rural and the urban areas by the migration from rural to urban areas between 1930 and 1936 followed by a counter movement of equal proportions between 1936 and 1940, or the more recent migrations brought about by war activities, the increase of relief during the depression—such changes viewed separately and without a study of their fundamental causes, are at best difficult to appraise. Reliable facts, however, as to the population and its background, extending over several decades, should greatly aid in arriving at sound judgments as to the permanent or transitory trend of such changes.

GRAPH VII. RENT AND TENANT INCOME, NORTH AND SOUTH




Note: Rent is the shelter rent, average for the area. Income is the anticipated average of tenant families. (Based on a graph in *Public Housing*, April 9, 1940, p. 4.)

## Family Budgets and Subsidies: Graded Rents vs. Adjusted Rents

*How Should Subsidies be Distributed?*

Granted that subsidies in one form or another are necessary to make good the deficiencies of income to the extent that will enable all families to live healthfully and wholesomely, then in what manner shall the subsidies be distributed? Obviously not the same subsidy to all, regardless of the extent of their needs; obviously then, if there is to be just distribution the subsidy must be in proportion to the need of each; obviously, also, there should be close coöperation between all agencies supplying these subsidies, whether through community chests, public welfare agencies, or housing projects, for it is the total family budget that is involved. "From each according to his ability; to each according to his need," would seem to sum up the essence of the total procedure. What concerns us here is the application of this reasoning to housing. And on this point there have been some lively debates between those supporting "graded rents" and those supporting "adjusted rents," two different methods of applying the subsidy for rent.

*Graded Rents under USHA*

In the short time that our USHA-aided projects have been in operation, the approved method and that commonly adopted, at least up to the end of 1940, was to *grade* the rents for all dwelling units, first on the basis of the number of their rooms, (taking into consideration the extra cost of bathrooms and kitchens); then, among units of the same number of rooms, to make further gradations on the basis of the desirability of the units. Desirability was based on location, as concerns convenience, quiet, exposure to sun, good outlook, possible variations in interior convenience, attractiveness in interior finish, etc. One difficulty experienced in this method is that what one family may consider desirable or attractive another may not, and for good reasons. Thus a family including old folks finds the ground floor of an apartment house most desirable, whereas a young couple without children may find the quiet of the top floor most desirable; one may find convenience to transportation paramount, while another is concerned with outlook, or convenience to the children's playground. Since all units meet approximately the same minimum standards for wholesome living, they differ only in regard to certain amenities, which different families rate differently, and any gradation of rents based on them must be largely, if not entirely, arbitrary.

From a social angle gradation of rents on the basis of the housing unit, if logically adhered to, pre-

sents an inherent difficulty. Generally speaking units of the same number of rooms involve the same capital costs, with a few possible exceptions—such as units in the interior of row houses or of apartment houses, which may with logic be said to cost less than those at the ends, and to be less desirable; with less logic it may be said that units between the ground floor and the top floor of apartment houses cost less and possibly are desired by fewer people. None of these differences, however, are sufficient in themselves to warrant any very wide gradation of rents. This line of reasoning seems to lead to the conclusion that if the subsidies in rents are to be based on the units occupied, then all the families requiring the same number of rooms should pay the same rent and, under the prevailing terms of eligibility, should have approximately the same income. By the application of such a principle each project would be limited to a very thin stratum of the population.

Also many administrative difficulties arise when the subsidy is a fixed characteristic of the dwelling unit or rent. For example, when there is a material increase in the income of a family occupying a unit of low rent, if the principle is to be rigidly enforced, the family must be at the expense of moving to a unit of higher rent if such be available—a unit whose location might not meet their particular needs or desires; if such an increase of income comes to a family occupying a unit of highest rent, it must, if the principle is enforced, move out of the project. More than one housing project director has reported families declining an advance in pay from their employers rather than be forced out and having to pay higher rent for poorer quarters elsewhere. A decrease in income raises a similar set of problems. In practice, however, in order to overcome these difficulties, a certain "tolerance" is allowed in the proportion of rent to total income—a tolerance which is temporary on the assumption that the change in income may be temporary. But in such cases, if the change in income proves to be permanent, the family must ultimately move.

### *Adjusted Rents under the National Capital Housing Authority*

Another method of determining the amount of subsidy is that adopted by The National Capital Housing Authority (prior to June 1, 1943 the Alley Dwelling Authority of the District of Columbia)[37] which has a longer experience than any other of our agencies. After adopting the economic rent as the basic for each type of unit, this authority *adjusts* or grades the subsidy to the needs of the family—to the needs of their total budget and income from all sources, including relief. Though the Alley Dwelling Authority uses the term "graded rents," this method is now commonly termed "adjusted rents," in differentiation from the term "graded rents," which has become associated with the current method.

Under this method subsidy may vary from a substantial part of the total rent to nothing, in case there is not available in the community any other decent housing at prices which the family can afford. Under this method the subsidy of any given family may be adjusted to those variations in income which must inevitably come to many families in a large housing project. By this procedure *all* who were in a slum-clearance area may be rehoused in the new project. As we have previously pointed out, (*p. 63*), the British have developed a number of such schemes for adjusted rents.[38]

Finally, toward the end of 1940, the USHA came around to recognizing the validity of the principle of adjusted rents. ". . . Local authorities have come to realize through experience that it is desirable to accommodate as soon as possible a cross section of all families in the lowest income group now obliged to live in sub-standard housing, rather than one restricted portion of these families. Toward these broader purposes, local authorities should formulate, as some already have, long-term housing programs. . . . Such a long-term program covering the entire lowest income group has the democratic advantages of not limiting tenancy to one exclusively narrow segment of the population, of including many families not at the very bottom of the 'lowest income group' who need decent housing and cannot afford it, and of reducing the average subsidy per family rehoused and thus helping more families for the same money."[39]

Much of the discussion of adjusting rents to incomes hinges on the effect such a system might have on the self-respect of the tenants as citizens. As the individual citizen is the smallest unit of our social organization, so the family is the largest independent mobile unit, and the neighborhood the largest unit in which families can live together in close personal contact and coöperation. To maintain the home and the neighborhood at their highest attainable level is of prime importance if the larger communities and the nations are themselves to attain their highest potential level. Self-respect is essential to the highest type of citizenship, and everything possible should be done to foster it in the individual, in the family and in the home. If our public school systems should discriminate in the advantages offered to families of varying incomes, many children and families would doubtless feel humiliated, and obviously our democratic

[37] "Graded Rents, Policy and Procedure in the District of Columbia," by John Ihlder, Executive Officer Alley Dwelling Authority of the District of Columbia Publication No. NM150, Oct. 1941, National Ass'n. Housing Officials, Chicago.

[38] The British experience is discussed in considerable detail in "Adjusted Rents," *op. cit.* pp. 15–28.

For a discussion of this subject by a very competent committee, see "Graded versus Proportional Rents in Public Housing," prepared by Beatrice Greenfield Rosahn, Citizen Housing Council of New York, 470 Fourth Ave., 1941.

[39] "Income Limits and Rents in USHA-aided Projects," Bull. 24, p. 1, revised Dec. 14, 1940, Federal Works Agency—United States Housing Authority, Wash., D. C.

traditions would be undermined. As it is, we offer to all the same recognized minimum of school opportunities which is deemed essential to intelligent citizenship, and greater opportunities are available for those of greater capacity. So it should be with public housing; housing of reasonably good standards should be available for all, without prejudice or discrimination, save that of a willingness of families to coöperate to the extent of their ability. Adjusted rents comply with these principles.

To settle down to a home of their own is doubtless the dream of many families now in the slums. It implies some degree of security, the realization of full responsibility as citizens, as voters and taxpayers contributing directly to the support of the community. But for most families the road to that achievement is a long and a slow one, leading from one drab neighborhood to another. Whatever can be done to shorten the road and to keep up the courage, self-respect, and living standards of those families on the way up will be a gain to the community and to the nation. Through public housing these things and some of the advantages that come with an owned home can be had from the start. With a comprehensive system of adjusted rents, a family may remain in the same neighborhood until they can pay the going commercial rent, and start saving for home ownership. Take the experience in New Haven. With the increase in wages and the number of family wage earners that came with war industrialization, rents were increased to reduce the subsidies; but a number of families moved out to buy houses of their own—contradicting the idea that once in a public housing project they are spoiled for anything else. "We find a definite tendency on the part of families whose incomes show signs of stability, to seek homes of their own."[40]

When the policy of adjusted rents is carried out to the point of making public housing development available to families with incomes from the lowest up to those able to pay the *economic rent* (excluding only those who lack the mental or social adjustment necessary to a coöperative life),[41] then our public housing policy becomes comparable in principle to that of our public schools, which are available to all, though all could not enjoy their benefits if required to pay their per capita share of the cost. In theory at least, public schooling is paid for in proportion to the ability of families to pay, through taxes, direct or indirect. The difference would remain that the housing would not be free, but would be paid for, in part or in whole, directly by each family in proportion to its ability to pay, just as in the taxing of our incomes. Reports on tenant incomes should be no less searching than income tax reports and should include relief as well as earned income.

[40] "Then and Now," 1942–43, Housing Authority of New Haven, p. 9.

[41] See discussion of the asocial groups in the section on Holland (p. 73).

The USHA put its stamp of approval on the broad policy. But there are some who fear that to base subsidies on tenant incomes rather than building units would be prejudicial to tenant self-respect. This, however, has not been the experience of the National Capital Housing Authority. Except for this experience, the discussion up to now has hinged largely on psychological attitudes and interpretations.

*Rent Certificates*

In this connection the proposed "rent certificate" needs consideration. The proposal is in effect that, to tenants whose income is too small to pay a normal commercial rent, the municipality issue a certificate to make good the deficiency, the certificate to be given to the landlord and by him collected from the city. The proposal is a recognition of the established fact that private enterprise cannot build new or remodel old housing (in conformity to accepted standards) which can profitably be rented to the run of slum dwellers, except with the aid of public funds. Since the "rent certificate" implies a subsidy, the principle of subsidies is not at issue. If the housing were built and operated by a private enterprise the rent, and therefore the subsidy, would have to be increased by the amount of the profit. And to determine the amount of the certificate due each tenant there would be need of a housing authority or other agency, call it what you will. The logical agency would seem to be that which has its agent right in the project, in touch with the tenants, which agent is the housing authority. Since private enterprise cannot operate without these two kinds of public aid, (*i.e.* the subsidy and the administrative agency) the logic of bringing it into the picture is not apparent. Those who propose the certificate claim that "the public housing movement as currently constituted is a social and political menace."[42] But they do not suggest how the alleged menace would be reduced if the subsidies were used to maintain the rents of private owners. As to the merits of the alleged menace, we have discussed that in the chapter on Policy.[42a]

The suggestion has been made by Mr. Bigger, author of the FHA Handbook, that the disbursement of rent certificates "might logically be a function of a local housing authority, involving only an extension of amount in its already operating methods of winnowing out and approving eligible tenants," but he continues, "In any case the issuance of certificates presupposes (1) issuance of certificates to landlords and (2) . . . safe-guards in operation and (3) the administrative machinery adequate to deal effectively with these safe-guards."[43] The safe-guards named have to do

[42] Point 2 of a statement issued by the National Association of Real Estate Boards at its meeting in Cleveland in March 1943.

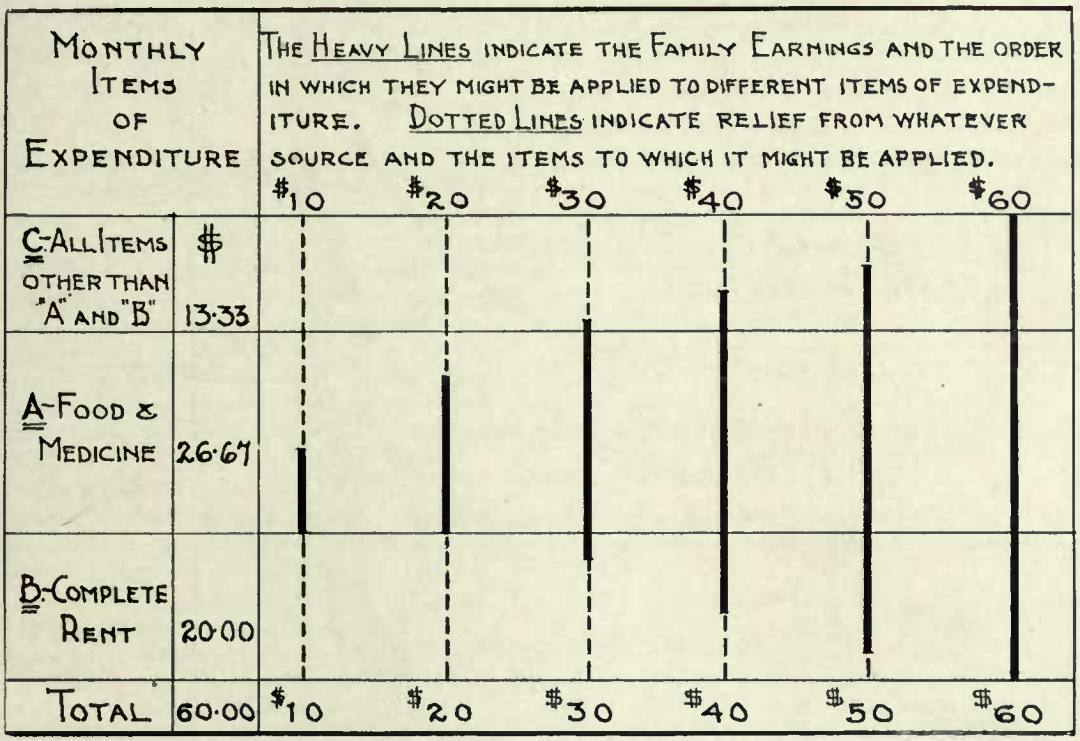
[42a] "The Rent Certificate Plan": NAHO, Chicago, Sept. 1944, discusses this subject at length.

[43] "Will There Be Any Urban Redevelopment?," Frederick Bigger, a paper read before the American Institute of Planners.

with the standards of eligibility of privately owned housing and the methods of arriving at the rent to be charged. Mr. Bigger feels that there would be "no more stigma of being on relief" than now applies (rightly or wrongly) to tenants of public housing projects; but he says nothing about the political pressure which might be brought to bear on the housing authority by the groups whose investments would be at stake.

It seems to be the concensus of the opinion of those who know the low-income tenants as citizens, that its aversion to accepting relief, the result is a crime against humanity." . . . "The capital expenditure which has gone into these improvements [public housing] is no more the responsibility of the tenant moving in than is the capital cost of the school to which he sends his children. If he pays the rent asked out of his own income he is not receiving rent relief. . . . Does the tenant of a private owner try to calculate what his landlord's capital investment was and what return said landlord is getting. . . . Does his self-respect suffer if the landlord appears to be losing out?"[44]

GRAPH VIII. DISTRIBUTION OF RENT AND RELIEF FOR ALL ITEMS OF EXPENDITURE FOR A FAMILY OF FOUR, FOR SIX DIFFERENT INCOMES.




"A" is assumed to have first call on earnings.

"B" is assumed to take 2/3rds of the remainder.

"C" takes the balance, or half as much as "B". The total of $20 for "B" is for rooms at $5 each in a USHA project (or elsewhere on similar terms). The proportion between "B" and "C" is based on average conditions throughout the U. S., for families with incomes of $720 (*i.e.* $60 a month), as shown in "Consumers Expenditure", *op. cit.*, Table 7a.

The graph is a modification of one in "Graded *vs.* Adjusted Rents" by Wm. Stanley Parker, but differs primarily in including all items of expenditure.

such a system would be at variance with the principle of self-respect advanced in a foregoing paragraph. On the other hand they find no such stigma in a public housing project. As Dr. Wood has put it: "An unskilled wage earner or low-salaried office worker who was self-supporting when he lived in a wornout, substandard house, privately owned, does not cease to be self-supporting when he moves into a public housing project and pays approximately the same rent for a house in good repair in a neighborhood safe for his children to grow up in. The "rent relief" label attached to such a family is a false label, and whether its effect is to cause it to refuse the benefits offered or to stifle

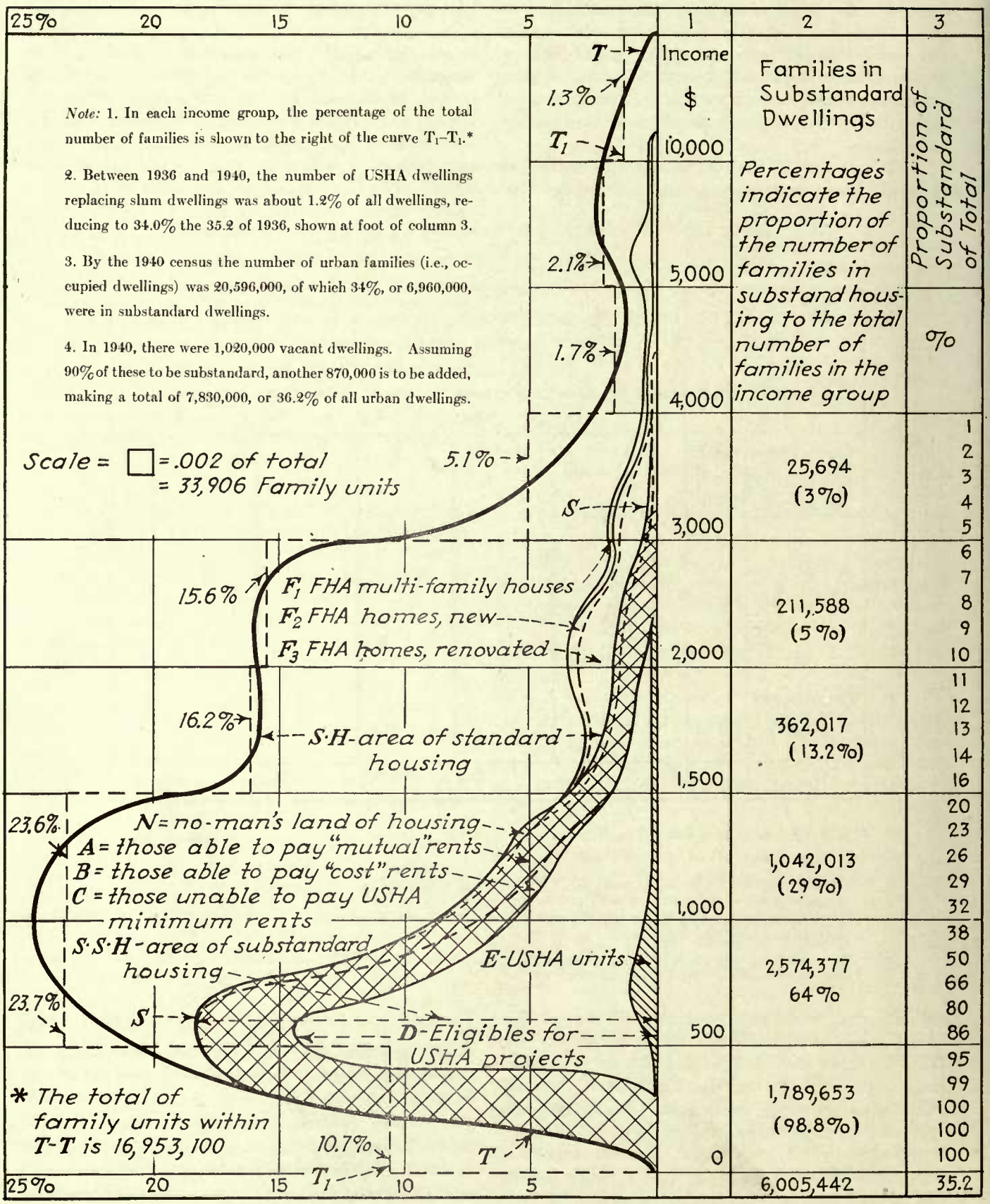
*The Relation of Subsidy for Rent to Other Items of Living*

Since rent, and all other items affected by deficient incomes, must be made good, and since all the items are not of equal importance, in what order should they be considered? Mr. William Stanley Parker has offered a solution to this in a series of graphs in which the budgets of families of various sizes and various incomes are broken down under three headings: A. Food, gas, and light: B. Clothing and sundries

[44] "Low-Rent Housing vs. Rent Certificates," by Dr. Edith Elmer Wood in *Public Housing*, Dec. 1943; National Public Housing Conference, New York.

GRAPH IX. CURVES OF ALL URBAN FAMILIES AND OF VARIOUS TYPES OF HOUSING: Standard Housing, Substandard Housing, Housing Aided by FHA and by USHA, and No-Man's Land

Data used in plotting the curves and the deductions made from them are set forth in the legend on page 143 and in the accompanying notes.



## Legend for Graph IX

The *Curve T-T* embraces the *total* number of families living in separate dwelling units in the urban areas of the United States, and shows their distribution throughout all income strata.[1]

*Curve S-S* (areas N, D, and E) embraces all families living in *sub-standard* dwelling units, as we *estimate* their numbers.[2] Since this is an estimate, all the area related to this curve also are estimates.

*Area G*, between the Curves S-S and T-T, represents the extent of all families living in standard Housing and is the normal area of operation for FHA.

*Area D* represents the area of those families eligible as tenants in USHA projects, under regulations in effect through 1940.[3]

*Area N* (*A, B and C*) represent the No-man's-land of housing, where no families can afford commercial rents for standard housing, but whose incomes are either too low (C), or too high (A and B) to have made them eligible for USHA housing.[4] The area is about 45% of the total of substandard Housing, S-S.

*Area F* indicates the number of FHA single family units (both new and renovated) and of multi-family units built to various income strata.[5]

*Area E* indicates the number of USHA units built up to Sept. 30, 1941, in various income strata.[6] This was five months before the termination of USHA, and fully a year after its greatest activity. For comments on the interpretation of the Graph, see p. 135.

The locus of the curve is based on the following reasoning, beginning at the bottom and working up: (1) In the USHA urban projects only the smaller families in some of the smaller southern urban areas had incomes as low as $312, and the rent they paid was approximately what was paid in slum housing. We therefore conclude that practically all families from that level down are in slum dwellings and we start the curve at the $312 level. (2) The average family having less than $500 income had a budget deficit of 51.9 percent (Graph IV B), and was paying 47.1 percent of income for rent (IV A), both of which indicate a struggle for the bare necessities of life, and therefore living in slum conditions and in sub-standard dwellings. This is confirmed by the fact that there was only a small number of USHA urban dwellings built at this level, despite the fact that 33 percent of all projects were in communities with a population of less than 25,000. Specifically we conclude that the families in this income strata who can afford standard dwellings is small—we estimate the substandard housing at 98 percent for the area from 0 to $500, and 95 percent from $400 to $500, (Col. 5). Up to the $750 level the proportion of deficits and of rent to income is still excessive (Graph IV) and we conclude that about 73 percent in this strata cannot afford standard housing; 66 percent at the $750 level. From there on the proportion of deficits and of rents to income both fall off more gradually (Graph IV) and we conclude that the proportion of families living in sub-standard dwellings likewise falls off more gradually. As we have noted in the text, private enterprise has not supplied housing for very large families in New York for less than about $4500.

(1) The proportion of families in each income group is from Family Expenditures in the United States, National Resources Planning Board, 1941, Table 87, and is based on the 1935–36 special census. See p. 116. The data for 1940, is referred to in notes 3 and 4 on the graph, but 1940 was not sufficiently near to normal to justify basing the Graph on the data for that year.

(2) The Curve S-S is an estimate only, but is based on significant data: (a) The proportion of income deficits at various income levels, (b) the proportion which rent bears to total income at various levels, (Graph IV), (c) the fact that the range of incomes in USHA projects varied from $312 in the smallest towns in warm climates to $2400 for extra large families in New York City, (d) the fact that, in certain cities, of those families living in slums applying for rents in certain USHA projects, from 20 to about 29 percent were ineligible because of incomes in excess of the legal limitations; (e) the fact that of all the urban dwelling units about 61 percent was in a poor state of repair as indicated by the Real Property Inventory of 1934, Table 7; (f) the fact that the 1940 census showed that about 22 percent of all urban dwellings, is over 40 years old, and the fact that, in the usual unorganized neighborhood, dwellings are obsolete after 35 or 40 years and the further fact that the denser slum areas (i.e., those areas of private residences transformed into tenements and of tenements built before enactment of tenement laws) were mostly built up more than 40 years ago; (g) the fact that USHA found that in various communities in which they operate the ratio of sub-standard housing varied from 3 to 65 percent, the variation being largely due to the age of the communities. So $4500 is taken as the upper limit of sub-standard dwellings. We assume that families at this level are but a portion of one percent. Working down from there, the proportion of sub-standard dwellings increases from this level to an average of 3 percent for the stratum between $3000 and $4000, and increases for the lower incomes at the rate shown in Col. 3. Other data influencing the extent of the area to be included as sub-standard are: (d), (e), (f), (g) under note 2.

(3) Area D is the total area of families living in sub-standard housing, less the area of No-man's land.

(4) Area N, the No-man's-land of housing, is made up of A, B, and C. C embraces all those families whose incomes are too small to make them eligible for USHA projects. It includes practically all below the lowest incomes in USHA housing—$312. The proportion of families in each income stratum we assume diminishes gradually up to about the $750 level and rapidly from there up. The proportion of families in the combined A and B areas, in relation to the total area of families living in sub-standard housing, is indicated by the proportion of those applicants rejected because of too high income, (*See note 2 (d)*) which averaged about 23 percent. This we have applied as the average over the entire area, but in larger proportion among the higher than among the lower incomes. The area at the lower level begins at the $562 level for the smallest units in small southern communities to $1440 in Manhattan (See text). The proportion of A to B is assumed to be small. The area of N is 45 percent of the total area within SS.

(5) The data for the curve enclosing the F area found in Seventh Annual Report of FHA, Dec. 31, 1940, in which Chart 24 shows the proportion which new FHA homes built at each income level bear to the total of the new homes built, and the same distribution for the existing homes. Data for the amount of both new and existing homes is found in Table I of the same report. The number of multi-family units is shown in Table 57 of the report; the proportion of units at the various income levels is based on data in Table 58, the factor for the ratio of rent to income being derived from Consumer's Expenditures in the U. S. Table II.

(6) For area E data for the distribution at income levels is found in *Public Housing*, 1937–1941, op. cit. p. 4.

(exclusive of winter fuel, doctors, medicine, and certain special needs): C. Rent. Item A has the first claim on all incomes. After item A is satisfied 50 per cent of the remaining income is to go to Item C, until a minimum rent is taken care of. Income is that of the entire family from all sources other than general relief. Our Graph VIII, on p. 141 is based on Mr. Parker's method, but departs from it as to the classification of expenditures and other details, as explained in the graph. This graph is presented only to illustrate a principle, and the specific proportions would not likely be applicable in any particular locality.

The function of housing authorities is to supply housing, not to administer relief. When subsidies are required it is because of deficiencies in incomes, which deficiency, involving shortages in all or most of the necessities of life, must be met by public aid of some form, call it relief or what you will—school taxes to make education available to all, subsidies to make decent housing available to all, special or general taxes to make milk available to all children. Either there should be some one public agency charged with supplying the relief funds necessary to meet all such deficiencies or there should be close coöperation between the several agencies dealing with the several problems.

Meeting the needs of the under-privileged is an ancient problem. The real answer, the ultimate answer, will be adequate incomes. Until that answer can be worked out, questions of procedures in regard to subsidies will probably continue to be discussed. If the discussion is carried on with a view of finding a common meeting ground of the minds, it should lead to a sound solution; if it should become a battle of entrenched attitudes or emotions, it might result in a serious setback. Frankness in facing and discussing fact is, or certainly should be, a characteristic trait of democracy, though at times it may be a handicap to rapid progress. We cannot cure a wrong situation until we are willing to face it. Expediency is a short-cut which takes no account of quicksands

## SECTION II. THE GROWTH, OBSOLESCENCE, AND REHABILITATION OF CITIES

### Urban Growth and Deterioration

*The Pattern of Urban Growth*

The location of new housing projects and the rehabilitation of obsolescent and obsolete neighborhoods require consideration of the probable direction of the future city growth and of how the land uses will in the future be distributed in the area of urban expansion. We can aid our foresight by taking a back sight into the origin of present conditions.

Without controlling plans, cities as they expand tend to follow certain broad trends. The "lie" of the land governs all other factors. Our cities in the first place began as settlements on some transportation route of water or land. Along our coast line the colonists came in boats seeking a good harbor as their first requisite. The pattern of the future city has been largely predestined by the lie of the land surrounding the harbor and by the shape of the harbor (whether an enclosed one, such as New Haven, or on a straight shore line, such as Chicago, or the shoreline of an island, such as Manhattan. In inland cities also the waterway frequently sets the pattern—otherwise, the overland route. The harbor and the business section adjoining it (or the stockade of the inland colony) became the center of activity, the nucleus from which the subsequent life of the colony has developed. As the cities have grown, the outlying higher and well drained land with good outlook has naturally been sought for residence; falls in the streams were sought to turn the wheels of the mills; roads ran along the stream valley up to the mills. So from the start there have been two main directions of attraction for the growth of the city; first, the inward attraction of the business center (a centripetal or centralizing force), then the outward attraction of the open country (a centrifugal or decentralizing force).

The movement due to the outward attraction has followed the lines of least resistance and has tended to flow first through the valleys, following the streams. When roads were established connecting colony with colony, they too followed the easiest grades, in the valleys near the streams. Business and population in general tended to follow these roads. So it is that, while these centralizing and decentralizing forces, working from a common center, have *tended* to produce a concentric growth, topographic features have almost invariably intervened to produce a radial or star-shaped pattern, with the concentration of population and activity diminishing from the center outward. This has been the normal pattern of growth of cities everywhere. Even in medieval towns where the city wall kept the outer edge of the principal growth within circumscribed bounds, the pattern within was still radial, from the center to the city gates, and beyond the city gates along the highways.

But as the towns have become cities, secondary business centers have developed—at the fork of the streams and at the forks of the roads, at the fords of the stream, about the mill—maybe a neighborhood shopping center, maybe a general commercial center. About these centers the population has become more concentrated. So from a single nucleus, the life of the cities has come to have other nuclei, and the pattern of growth has become complicated. Out of these complications may arise future confusion in the development of the city, if there is not a planned control—and all too often there is none.

Among a certain group of sociologists, followed by some writers on the siting of housing projects, there has been an over-emphasis of the concentric tendency in urban growth, insisting literally that growth is in actual concentric zones. Assuming that such growth were conceivable in the early years of a village or city on a perfectly level plane, with no streams, ridges, or other interrupting topographical features, even there a highway to some adjoining community would ultimately disrupt the pattern. Even as a diagrammatic expression of a hypothetical abstraction it is only a half truth (ignoring the radial tendency), which apparently has led some economists astray.[1]

The human element is of course brought to bear on the pattern indirectly at every turn. Many of the great industrial centers in New England towns, such as the Stanley Works in New Britain, trace their location to the isolated home shop of some ingenious individual, without regard to topography or general population trends, literally demonstrating Emerson's statement, "If a man . . . can make a better mouse trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door." Residential neighborhoods also often grow up spontaneously about some magnetic influential individual, with little regard to other advantages of location.

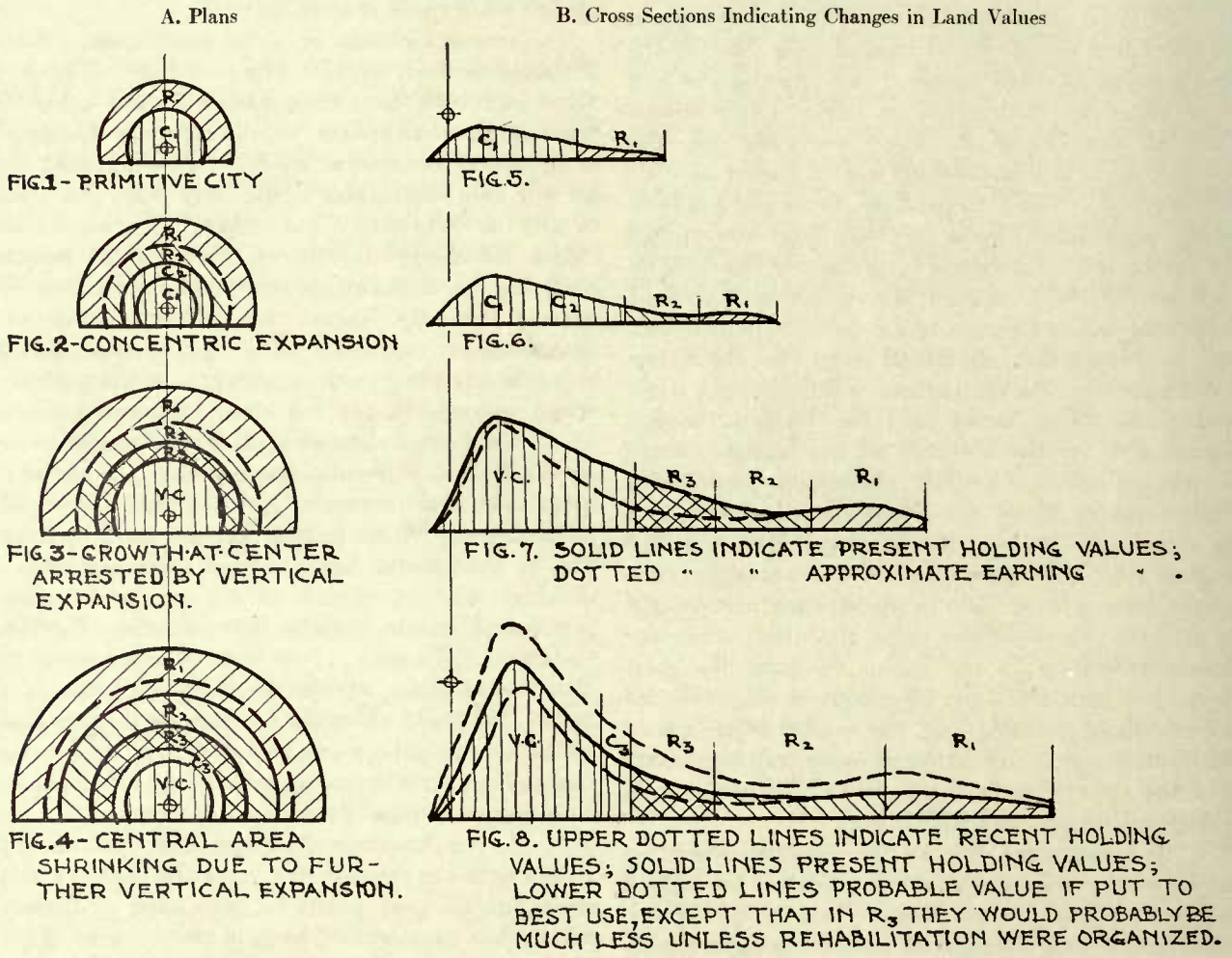
As our American cities have developed along the coasts or in the interior, first came the docks or freight yards, as the case might be, and back of these the wholesalers warehouses; back of these a zone of retail stores; and back of these the residential zones, usually merging into the rural area. As the wholesale zone grows it encroaches on the business zone; the business zone, pushing outward from the center and blocked at the rear by the residential zone, becomes more congested by the extension of buildings into the side yards and the rear yards of their original village lots and by building higher. But finally business pushes back into the residential area, creating a fringe of mixed business and residential uses. The attendant increase in population and traffic and the fringe of mixed uses cause the deterioration of the residential area just beyond the fringe. The residences which were originally nearest

[1] The fallacy of the thesis and of the data on which it is based is thoroughly discussed by Prof. Maurice R. Davie, The Pattern of Urban Growth, in "Studies in the Science of Society." A symposium. Yale University Press.

the center have been ousted by the business uses of the land, which are more profitable; the former residents, attracted both by the amenities and by the cheaper land of the more open country, have gone to the outskirts just beyond the earlier residential zone. Those having horses, the only mode of transportation in the early days, could get far from the center; those who had to walk kept as close to their place of work the auto drivers moved further out, the walkers moved into the old houses in this intermediate zone also. This general tendency was diagrammatically expressed by Henry Wright, as shown in Graph X.

So in its concentric growth the city is in some respects like the trunk of a tree, in which, as the new annular rings of sapwood form next to the bark, the older interior rings formed in earlier years become

GRAPH X. PATTERN OF GROWTH AND BLIGHT IN CITIES OF THE UNITED STATES.*




$C_1$. area of commerce and light industry
$C_2$. area in extension of $C_1$.
$C_3$. area of inactive commerce and light industry
$R_1$. area of residences, active
$R_2$. area of residences, inactive
$R_3$. area of actual slums
V-C. area of vertical expansion

*Based on graphs by Henry Wright in Survey Graphic. (Reproduced in "Urban Blight and Slums", *op. cit.*, pp. 9 and 10).

as possible. The trolley car, followed by the automobile, speeded up and exaggerated these tendencies. Between the newer business zone and the newer residence zone thus produced, the entire remaining strip of the old residence zone in turn becomes obsolescent and finally obsolete; then follows the incipient slum, finally the acute slum. The shift of location of the residential population in turn affects the location of the retail business section, particularly the shopping centers. As more of the horse-and-buggy drivers and more dense: expansive growth on the outside, while within is an increase in density but no change in size—an ever-continuing structural change corresponding to the function of living and growing. But the tree cannot live without leaves, so there are the everspreading branches—a radial growth. More than that, it is nurtured by a radial system of roots. The roots and the branches, which give the tree vitality through contact with the soil and air surrounding them, are, in some respects, like the communications line of the

city with the suburbs, and with the region and the world at large. As the young branches sprout from the trunk they are nurtured and sustained by the trunk, but later, through their leaves, they contribute to the general sustenance of the tree. So suburbs become an essential part of the urban community. We might press this simile further, into the pruning and other care required to keep trees sound and healthy.

As the concentric growth of the city progresses and approaches secondary business centers previously established—those other nuclei of concentration on the radial highways—it meets resistance to a growth in a direct line, and must pass around it, making a pattern of congestion in the city plan like the grain in the tree trunk around a limb, as shown by the knots in a board cut from the trunk. Witness Old Greenwich Village in New York, now revitalized by judicious zoning,[2] and the fine residence section of former days around Washington Square, now zoned, in part at least, to multi-family uses. Such a secondary center may become a major center, as about the Grand Central Station.[3]

Aside from these secondary centers within the corporate confines of the city, usually there are centers of growth along the city boundary line, just within or just outside. They come into being largely from the desire to get more land at less cost, and, when outside the corporate limits of the city, they usually have the further advantage of a lower tax rate. In the majority of cases they start as suburban residential areas, the more desirable sites commonly being developed with large lots and an open plan, the less desirable ones being developed more intensively for those who cannot afford the more spacious development. Stores and other community facilities come with the growth of the community. In like manner industry may seek the advantages of more space and lower taxes, choosing sites with good transportation facilities.

These suburbs do not originate as an immediate extension of the city. In time the parent city and the suburb meet and become integrated, even though the two may remain separate corporations. Some of the parks and reservoirs of the city, for example, may be situated in the suburban community, while the sewerage system and other public utilities of the suburb may tap those of the city. It is essential that these suburbs be taken into account in planning for the future of the city. For the good of each, close coöperation is needed—of which more in the chapter on rehabilitation.

Our smaller cities obviously have not arrived at such a state of complexity and sharp contrasts as New York, for example. Nor do all cities of the same size show the same degree of complexity, for the actual pattern of growth varies with the type of the activities and with the topography. An agricultural center, such as Lincoln, Nebraska, differs from an industrial center such as Dayton or Detroit; a city on a small island or peninsula will become congested sooner than one on a prairie. Just as the law of gravity produces one pattern of motion on the pendulum and another on the thrown ball, so the pull to the center and the pull to the outskirts each exerts its own influence and they combine to produce city patterns as varied as the varying topographies and activities of the cities.

The characteristic pattern of concentric zones developed by any city, likewise the pattern of growth along the radial highways is, despite certain controlling topographical features, obviously the result of the cumulative action of individuals in choosing the location of their activities, rather than the result of a logical and concerted plan of action of the entire population. Our civilization has not yet arrived at a stage in which cities generally recognize the vital importance of an urban environment planned for efficiency and adaptable to growing needs. Whatever the factors, the pattern of growth which each city has followed and the reasons for it, together with subsequent changes and predictable changes should be considered when selecting housing sites and rehabilitating obsolescent or obsolete neighborhoods. In the future we should plan for a more reasoned and orderly development of our social and economic life, and seize every opportunity to that end—as in fitting housing projects into the city plan.

*Pattern of Urban Obsolescence*

Looked at from another angle cities in their physical form are the result of the activities of a group of people organized to solve many of their problems in common. They usually start as a small group with some common interest and relatively simple needs, possibly with a church or a school as the first community building. As they grow in size and complexity, requiring common roads, common water supply, common sewage disposal, and other facilities necessary to a wholesome existence, they undertake to provide these things in common, because they are heirs to a civilization which long ago learned the advantages of community of action. In fact, the extent and the success of community action is one measure of the advance of a civilization. This does not imply common ownership, but it does imply the establishment of regulations for an orderly and well balanced growth for the best interest of the community as a whole, regulations to prevent the exploiting of any part of the physical city or its population by individuals or groups of individuals. The lack of such organic regulations results in urban blights of various forms.

Since the city is a community of human activities, it is a complex organism, obeying biological laws, not mathematical laws. Being organic, it is not static, but ever-growing and changing because of the ever-shifting population and new inventions. Like

[2] Edward M. Bassett, quoted by Walker, p. 145.

[3] For further development of this subject see "The Land Question as Related to Zoning," Geo. H. Gray, *J. Am. Inst. Architects*, Oct. 1921.

the nest of the hornet and the ant, the outward form of the city is the structural result of inner activity; but, due to the great complexity and variety of activities and the fact that human individuals act independently, the forms which cities take are more variable and more complicated than the nests of hornets or ants. The changing population results from new generations, new immigrants, as well as the shiftings of the existing families. With new inventions come new occupations, new ways of working and living, leaving in their wake the old buildings suited for things done in the old way, for a life lived in the old way. The old street layout and the sub-division of the land into small lots was for the old way, the obsolete way. These obsolete areas of our cities are our blighted areas. As they exist, the locations themselves, as defined by lots and blocks, are obsolete in relation to the life of the city—obsolete for any of the major uses of urban land: for industry, retail business or residence, public buildings, streets and parks. Obsolete areas may occur anywhere in the older part of the city; they may be industrial areas, business areas or residential areas, and each of these affects the housing problem in our present-day cities, for the location of housing cannot be considered apart from the location of employment, or even of the diversions of leisure.

A major cause of obsolescence is inflated land values—values which usually have their origin in over-intensive use. The owner who covers the maximum possible area of his land with tall buildings pays no more for public service (despite the fact that he uses them more intensively) and so his land cost per unit of floor area is much smaller than that of less intensively developed land about him. Owners of this nearby land, however, feel justified in holding their land also for the potential value. This reasoning affects a far larger area than is warranted by the demand. Each owner, hoping for an increase in demand, due to increase in population, is temporarily content with any development which will pay taxes, and he puts little money into upkeep. So surrounding the areas of intensive development are large areas where the buildings are either obsolescent or are temporary "taxpayers" and where the price is not related to present earnings.

It is the obsolete *residential* areas, nevertheless, that are of particular importance to those interested in good housing. They are of two kinds, (a) areas of single family houses originally built for those who were relatively prosperous; (b) areas developed with tenements, for families of low income. Many of the old and obsolete private houses left standing in the older sections of a city were built for commodious living, with servants. As left, they are unsuited for families living on a restricted scale. So, as we have previously shown in some detail, first they are transformed into boarding and rooming houses, in which couples, even with young children, may occupy one bedroom; or again such a room may be subdivided into two rooms. Usually there is no increase in the toilet facilities, which are for all in common. With the increase of population and the lesser prosperity of the new tenant population, with neighborhood pride gone the way of the former owner-occupants, there is a general running down of the neighborhood. So the supply of old houses rapidly increases, often even in excess of the demand for boarding and rooming houses. The next most available use is had by transforming each floor into one or more apartments and converting the old stable on the back of the lot into living quarters. A characteristic of tenements in the larger cities has been relatively fast deterioration due to a lack of a coöperative spirit between tenant and landlord. In smaller cities multi-family houses are commonly in the form of flat buildings, often of wooden frame construction of two or three stories, with one or two flats on each floor. Not infrequently, particularly in the smaller buildings, the owner occupies one of the flats and acts as janitor; in such cases the relation between owner and tenants is likely to be coöperative, and deterioration is not so rapid. This is also true in public housing projects, in which the manager's office is on the site.

Since rent returns depend on the number of rooms (other things being equal), rooms are made small; interior space without windows is often subdivided into bedrooms. As we have previously pointed out, in New York it was not until after 1901 that there was any effective general regulation directed to insure that new buildings would be sanitary and healthful. In most cities in the United States regulation came later. So the unsanitary conditions have multiplied with the population. In the obsolete neighborhoods of larger cities new "tenement" houses have been built in competition with the old transformed buildings, but still following their pattern of interior congestion, built on the same narrow lots, new building expanding over most of the old yard space, with more and more stories, congesting the land as well as the buildings. By all of this one recognizes the acute slum—a gradual transformation from obsolete residential neighborhoods.

Obsolete factory buildings in neighborhoods supplied by obsolete transportation facilities (docks, railroads, streets) are also deserted for new factory neighborhoods. They too, particularly if large, may seek the outer open spaces—but on the other side of the town from the better residential section—and may carry some of the higher-paid working population in that direction. Yet if some factory required relatively little space, it may have intruded into an obsolete residence neighborhood where cheap labor was at hand.

However run-down the residence neighborhood, it must have its neighborhood stores, its small business. So the parts of the city change with growth. Were it not that buildings and street systems become obsolete, a city might conceivably change only by new additions around the outer edge, leaving the old in its original use. Obsolescence is not only *a* cause, but

the most potent cause in the changes in urban neighborhoods—*the* common cause of "blighted" areas.

There is, however, another cause. When zoning laws have been inaugurated, owners of land near the centers of cities very naturally have sought to have their land zoned so as to be available for these more intensive uses which yield larger returns. As a consequence, and as we shall show more in detail later, a far greater area has been zoned for business and apartments than can be absorbed for such use, and many areas have become unpopular for private residences because of intrusion of one or more business uses, or apartments, or because of the prospect of such intrusion. The same results may occur in any area which is made available for less exclusive uses, such as a business area opened up also for light industry. The hope of the owner that his land might ultimately be in demand for the more intensive uses has caused him to set a high valuation on it. The tax assessors also have too often assumed this valuation.

Since there is thus created a large over-supply of land for these more intensive uses, only a portion of it is used for those more profitable uses. Meantime the salability of most of the land for private residences has been destroyed by the intrusions. The high taxes lead the owners of over-zoned properties to transform them first into rooming houses, and finally into tenements. The higher prices of land have led builders of houses to seek suburban land. Then follows the cycle of obsolescence previously described. As Mr. Russell Van Nest Black points out, our zoning for more intensive uses has been like a risky lottery with a few grand prizes for one property owner in a hundred, and heavy losses for the other ninety-nine.[4] The proper and logical use of zoning is indispensable; its abuse is costly both to the majority of private owners and to the community.

Obsolete neighborhoods cannot be cast on the dump like obsolete and worn-out cars. The house can be and is often abandoned, or torn down and the land finally foreclosed for taxes; but the streets remain there with their sewers, lighting, and greater need of sanitation and policing. The city itself cannot abandon these neighborhoods, and the worse they become and the more they are shunned, the greater becomes their extent; they cease to produce enough taxes to pay their share of city expenses. They have been well termed the "deficit areas." The prosperous areas of the city, diminishing in extent as the blighted areas encroach upon them, must carry the extra burden of expenses, a subsidy for the blighted areas.

In Boston in 1934 a survey of the costs and incomes of six diversified types of neighborhoods, from residential to industrial, established factually the soundness of the principle of classifying neighborhoods as deficit and self-supporting, or more than self-supporting.[5] This partial survey was followed by a survey of the 127 census tracts making up the city. This disclosed that by far the greater number of these tracts were deficit areas and that they were being supported by a very small area in the center of municipal activity.[6] This confirmed the previous finding and showed that 88½ per cent of the population, using 90 per cent of the gross area, failed to pay enough taxes to cover the services rendered them; but what is more important, it supplied the data for city-wide remedial plans—an important contribution to the technique of rehabilitation. The cost was about 6 cents per capita of population. The plan for one area based on this data we reproduce in the chapter on Urban Rehabilitation. (*See p. 158.*)

This blight is a creeping paralysis which expands to block after block until the more prosperous sections of the city find themselves paralyzed by an insupportable tax burden because of the obsolete areas. Obviously to let such a situation drift is civic suicide.[7] Replanning and rehabilitation are not only essential to the life of the city, they also hold promise for a supply of well-located housing.

### Rehabilitation and Redevelopment

*City-wide Considerations*

There is but one way out of the menace of obsolescence. It is to replan these neighborhoods so that they will meet needs of future use whether the future use be the original use or a new one. Conditions may warrant rehabilitation of existing buildings, or may call for demolishing of all buildings and a plan for complete redevelopment. Such replanning should begin with the street plan, and be followed by a reorganization of the block plan. But before these things are undertaken there should be prepared a master plan of the entire city showing a rational distribution of all activities of the city life, and the necessary traffic routes.

The obsolete and obsolescent residence areas are so extensive in most cities that often they constitute a formidable part of the developed area of the city—about 90 per cent in Boston. The lines of demarcation are not sharply defined between good housing, obsolescent, obsolete and definitely unsanitary housing; and the number in each group is constantly changing through continuing obsolescence on the one hand and minor repairs and modernization on the other, so that estimates of numbers or precise proportions would be of little value, and would even be misleading unless based on current surveys for each locality. The obsolete areas are not all occupied by families of uniformly

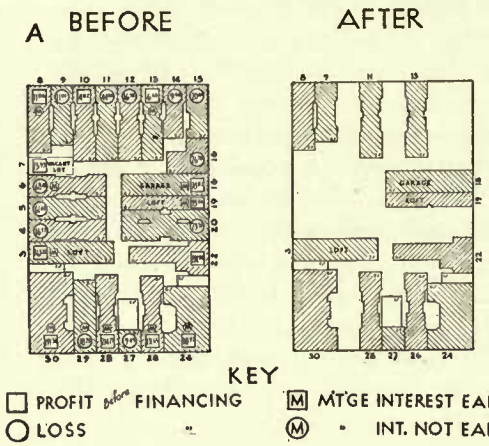
[4] "Civic Planning Comment" in "New Jersey Municipalities," March 1934. See also quotation from this article on page 154.

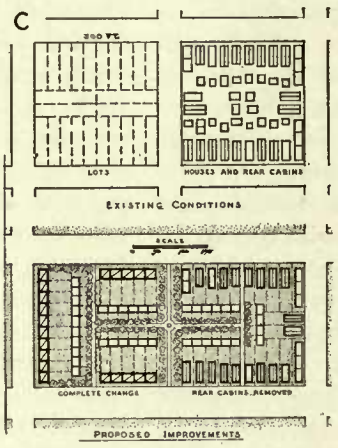
[5] "What Do Slums Cost?" Wm. Stanley Parker, *Architectural Record*, p. 75, Feb. 1935.

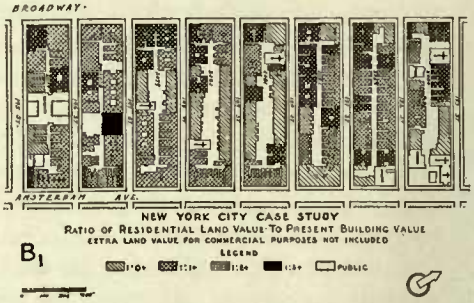
[6] "Report on The Income and Cost Survey of the City of Boston," 1935, by the City Planning Board.

[7] An excellent outline of this subject as it affects all uses of land is found in "Decentralization, What It is Doing to Our Cities." Urban Land Inst., 22 West Monroe St., Chicago, April 1940.

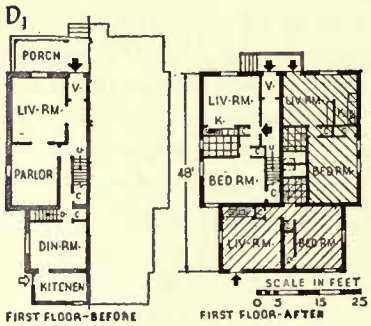
Note: A and D are plans for the rehabilitation of structure only, utilizing existing streets. The others are redevelopment projects, involving change of street plan and new buildings, though retaining some.



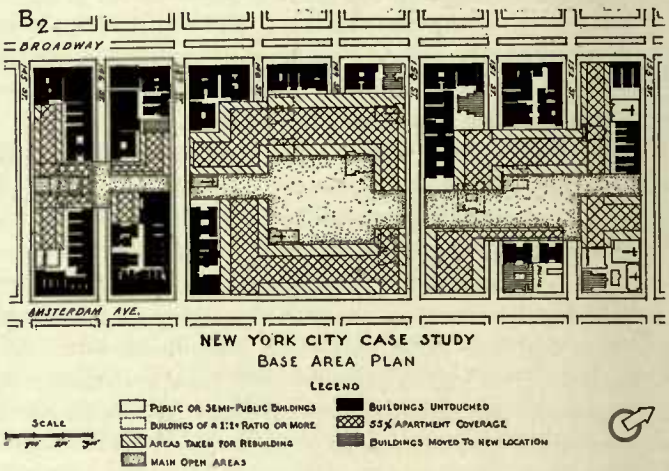




A. 1935. New York. Study of Gabriel overblock #326A, by A. Holden.
$B_1$. 1937. New York. Broadway and 145–153 Streets. Study by H. Wright.*
C. 1937. New Orleans. Study by H. Wright.*
* Reproduced from "Urban Blight and Slums", M. L. Walker, by courtesy of the Harvard Press.

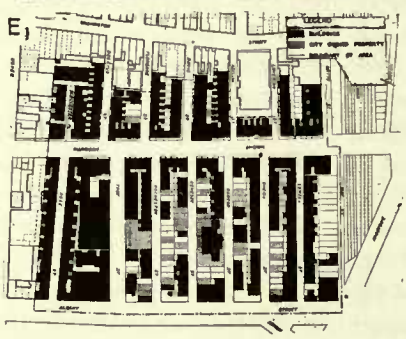


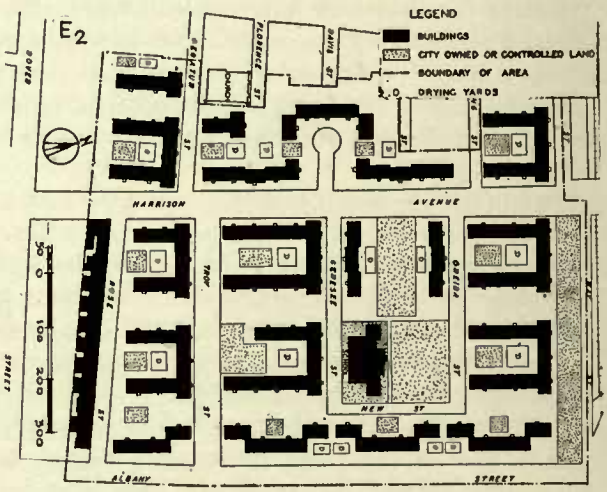


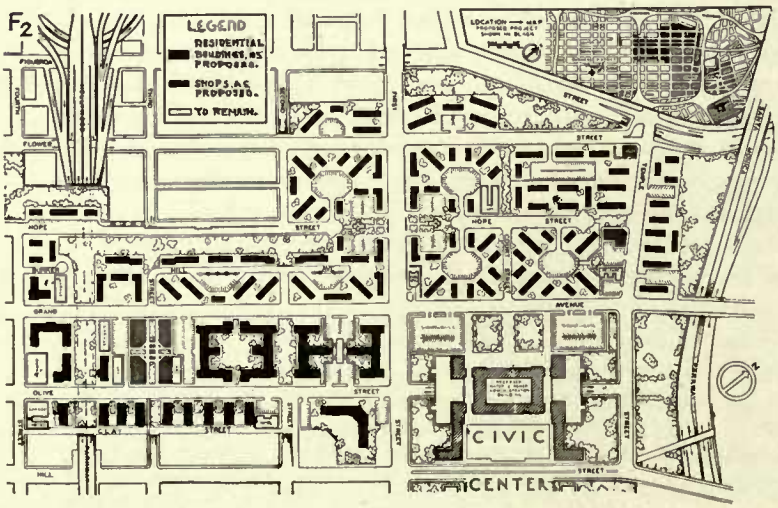


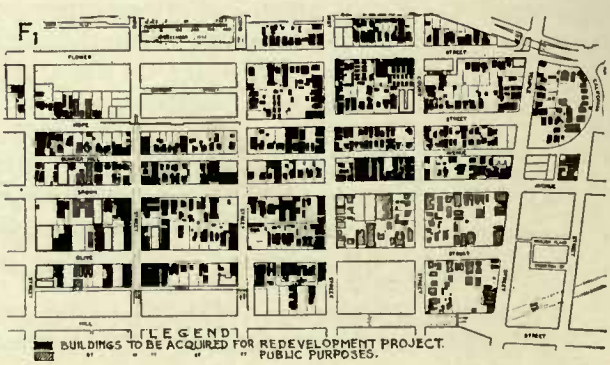



D. 1939. Philadelphia, North 40th Street. A. W. Binns, Promoter.
E. 1942. Boston. "New York Streets Area". *See Plate XXXIX, C, D.*
F. Los Angeles, Bunker Hill, for shopping area (note parking spaces), residences and public buildings.



low income; but, whatever groups may occupy them, they are a sore spot in the social and economic fabric of each city, and the aggregate of all the development of all the cities of the nation is so great that the rehabilitation of the obsolete areas becomes important in the national economy. As they are a cancerous growth which in its very nature spreads into other areas, the cure calls for an exploratory operation in advance of a major one.

The exploratory operation should look into the city-wide conditions, find the facts about the populations living in these areas—the make-up of the families (parents, children and others), their occupations, places of work, means of transportation to and from work; their income, the location of their community services (shopping centers, schools, playgrounds, parks, movie houses and the like); it should determine which areas should be rehabilitated, which should be redeveloped, which houses should come down and which should be remodeled; the relation of the street system to neighborhood needs, and if or how it integrates with the major traffic plan of the city. With these data it can be reasonably ascertained to what extent the areas should be continued as residence areas and for what type of residence, or for what other uses they should be zoned; what changes need to be made in the plan of the streets and what advantageous readjustment can be made in the use of private land.

As we have seen in the history of housing conditions in New York City, small lots individually owned and competitively developed have been a potent factor in bringing about block over-crowding and dark, ill-ventilated tenements. That condition is generally true to a greater or lesser extent in all American cities, to a far greater extent than would be admitted by most who have not made a personal investigation. The alternative to such development is development with the block, the super-block, or the neighborhood as the unit, under a single management, whether by one owner or an association of many owners. In the past there has been a serious obstacle to this procedure, namely, the difficulty in bringing each and every piece of property in the block under one management. To some extent, at least that obstacle no longer exists in those cities that have a housing authority; for they have the right of eminent domain, which under most state laws they can exercise in behalf of any housing which they may undertake.[8] Assuming that much of such housing would have to be for those who are unable to obtain decent housing within their incomes, it would still take in that large group of "forgotten A's and B's," who, when not in acute slums, are mostly in the incipient slums.

This right of the housing authority offers a way, under existing laws, to start this work on a large scale, with housing as the chief objective. Following the success of that, it should be easier to extend similar benefits to blighted areas, other than residential, through the agency of the existing municipal public works bureau. This marks a fundamental change in what was formerly a discouraging, if not a hopeless situation. It makes possible the immediate organization for the regeneration of our cities[8a]. The details of this procedure we will take up a little later. In certain states, as we shall see a little later, this right of eminent domain has been extended to "development corporations."

The older portions of the cities, as we have also pointed out, are in competition with their suburbs. An obsolete residence neighborhood near the center of the city, rehabilitated or redeveloped along attractive and efficient modern lines, with playgrounds to keep the youngsters off the streets, and all the other conveniences and amenities of a well-organized neighborhood, holds out many advantages and may well compete with the suburbs. Of this, more is in the next chapter.

In the discussion of housing in England we pointed out that in the early years there was disappointment in the fact that the hoped-for "filtering up" was not in reality evident (*p. 60*). When a family which has been living in the slums comes into better circumstances and can move into a better neighborhood, the house left vacant does not make an opportunity for filtering-up. When someone in a neighborhood better than the slums moves out, that also offers no opportunity for filtering up, except to those in the slums who have improved their circumstances. It is only when a period of prosperity follows a period of depression that there is any appreciable number of those in the slums who might afford to move up—and not then if rents rise with the boom, as they have done in the past. What more frequently happens in periods of prosperity following depression is breaking down of households which have been doubling up. In order to make "filtering up" operate to any appreciable extent, it would be necessary to maintain rent control, and to rehabilitate not only the buildings, but the neighborhood.

It has been suggested by the housing committee of Producers' Council that "filtering up" may be expected to supply a *major portion* of the required housing."[9] (Italics are ours). Their specific suggestion is that "the housing of families with intermediate levels of income (between those requiring a subsidy and those able to pay for housing of accepted standards) should

[8] An analysis of the laws of the various states is contained in "State Enabling Legislation for Public Housing," Nat'l. Ass'n. of Public Housing Officials, Chicago, 1940.

[8a] The War Housing program has demonstrated the efficiency of local authorities in dealing with a wide variety of housing, including the erection of housing which would normally be developed by private enterprise. *See p. 39.*

[9] "Toward a Postwar Housing Plan—Prepared and Issued for Consideration in Determining Suitable Postwar Housing Legislation and Other Forms of Implementation," Postwar Committee, The Producers Council, Inc., 815 15th St., N.W., Washington, D. C.

be accomplished by the filtering-up process and by the expediting of the process."[10] This area is the A and B of No Man's Land on Graph IX, p. 142. The committee recognized that filtering up can supply those in this group only when there is a sufficient supply of old housing which is of such construction and plan as to be susceptible of replanning and modernization without undue cost, and in such a neighborhood as is satisfactory or can be made so with reasonable expense.[9] As we have previously pointed out, the extent to which these conditions can be met vary in different cities, and it is very evident that obsolete tenement or apartment house areas do not usually lend themselves to rehabilitation. Favorable conditions will in general be found only in neighborhoods in which the predominant type of housing is obsolete or obsolescent houses built for single families, with little encroachment on the backyard area. That these neighborhoods hold possibilities for rehabilitation, and hence for "filtering up," we are convinced; but we question that in many if any cities they will supply the "major portion."

In the early days of zoning there was some degree of justification for the over-zoning, which we have previously described, because it had not then become apparent that the rate of increase of our population was in for a rapid decline. Cities were expected to grow indefinitely, as they had in the past. In our consideration of population trends we have pointed out that this may or may not be true in any given city. These earlier zoning laws should therefore be reviewed and revised in the light of present population trends, of the zoning experience of the past years, of current conditions, and of what, in the light of the latest census data, it seems reasonable to expect of the future.

We can now compute reasonably closely the areas which it will be wise to set aside for the various uses of land in any city. In his book on "Urban Land Uses,"[11] Mr. Harland Bartholomew made a study of sixteen cities (subsequently increased to twenty-seven), varying in population from 5,000 to 300,000, for which he prepared plans and had accurate data. These data demonstrate that most of the major uses of land tend toward a fairly constant ratio of the total of developed land in the city to the population. This is strikingly true of those uses which pertain strictly to the uses of the local community, such as residences, single family, two family and multi-family; intra—urban industries—laundries, cleaning and dyeing establishments, service garages, etc.; and it is also true of public and semi-public buildings and streets. In the cities which Mr. Bartholomew examined these strictly local uses total a mean average of approximately 84 per cent of the total developed area of the city, leaving for parks and for general industry (including railroads and docks) approximately 16 per cent.[12] *See Graph XI, p. 153.*

Supplementing the foregoing studies, the National Resources Committee made a study of a number of other cities, increasing the geographic range to include one New England city and increasing the population range to include more large cities.[13] The data pertained to all land uses in six cities,[14] to public ownership in twenty-one.[15] They were gathered through questionnaires to city planning authorities, and for that reason probably are not as uniformly reliable as Mr. Bartholomew's data.

While the area required for parks and playgrounds varied considerably in the cities studied, we can nevertheless today estimate closely for these uses, on the basis of the actual needs of the population. In the past, parks and playgrounds were not generally recognized as a necessity. Such recognition took hold in some communities earlier than in others, accounting in part for the existing wide divergence among cities in the percentage of the urban area given over to park and playground use. Our parks were originally laid out about a system of driveways largely for the benefit of the more prosperous; but more and more they have become the playgrounds for all classes and all ages, and include a great diversity of uses, such as hiking trails and even ski trails in the larger outlying parks. This is making parks more available to larger numbers and more of an aid to the general health and well-being of the community. So in the future we can safely assume that, barring certain special conditions, parks and playgrounds will require approximately 1 acre per 100 persons, as recommended by the National Park and Playground Association.[16, 17] A state or national park which might be located within reach of the city, as well as the possible location of the city parks in or extending into the area of some suburb not incorporated in the town, would be a special condition affecting the area within the city to be allocated to parks and playgrounds; so would conditions which require large terminal transportational facilities, parking areas, public utilities, etc.

In the proportion of land used for general industry, among the cities examined by Mr. Bartholomew, there is considerable variation. This is as we might expect when we consider the activities which characterize different cities. A city in an agricultural

[10] *Ibid.*, p. 61.

[11] "Urban Land Uses," by Harland Bartholomew, Harvard University Press, 1938, p. 127.

[12] *Ibid.*, p. 141. In the above figure 1 per cent is estimated for local industries.

[13] "Urban Planning and Land Policies, Vol. II of Supplementary Report of the Urbanism Committee to the National Resources Committee," U. S. Government Printing Office, Washington, 1939.

[14] *Ibid.*, p. 350.

[15] *Ibid.*, p. 225.

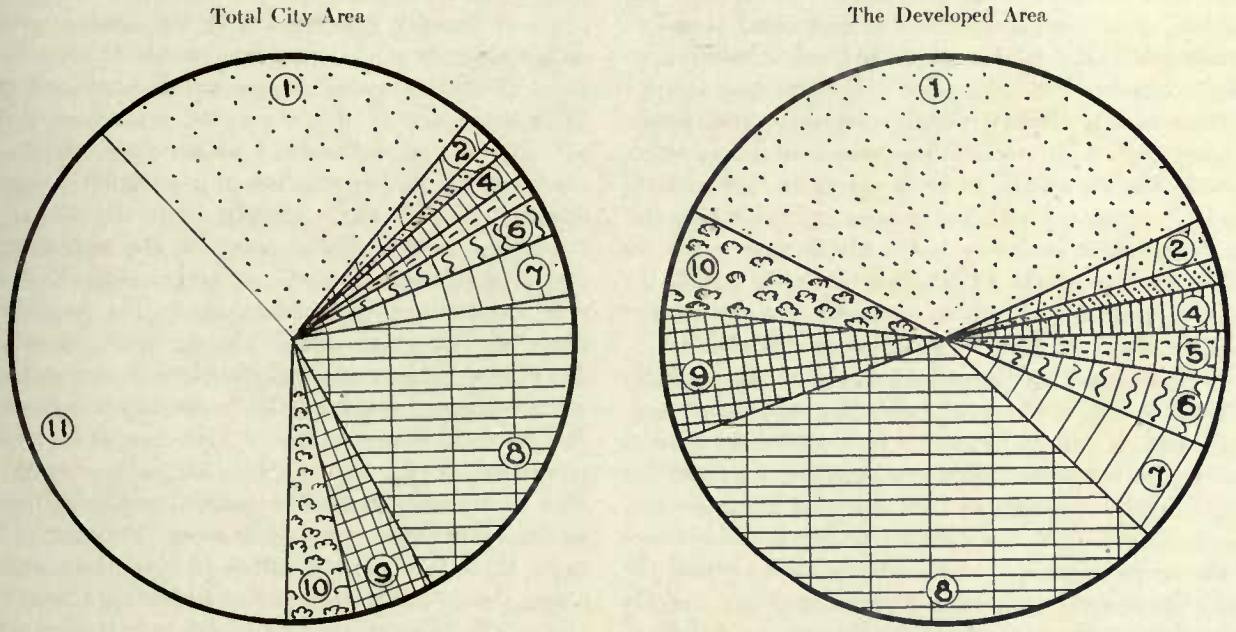
[16] A special committee of the American Society of Planning Officials made a fresh study of this entire subject in 1943.

[17] See also, "Standards for Neighborhood Recreation Areas and Facilities," National Recreation Association, 315 Fourth Ave., New York, 10, Oct., 1943.

center, such as Lincoln, Nebraska, may require a small area for its wholesale markets and warehouses compared to the factory space required for an industrial city, such as Detroit; if either of these types of city happens also to be a railroad center, or to have an important harbor, that too will affect the proportion of the area needed. But in a group of cities with similar activities and comparable size it is reasonable to expect that the trend for industries would follow a pattern of uniformity somewhat similar to that found in the other 84 per cent of land uses. A first requisite, of course, within each city is to determine the present

GRAPH XI. AVERAGE PERCENTAGE OF LAND USE FOR VARIOUS URBAN PURPOSES.

In Self Contained Cities




| | USE | AVERAGE PERCENTAGE OF TOTAL CITY | | AVERAGE PERCENTAGE OF DEVELOPED AREA | |
|---|---|---|---|---|---|
| | | Self Contained[1] | Satellite [5] | Self Contained[1] | Satellite[5] |
| 1 | Single Family | 22.85 | 27-48 | 36.13 | 44-30 |
| 2 | Two Family | 1.66 | 1-53[6] | 2.54 | 2-38[6] |
| 3 | Multiple Family | 0.90 | 0-94[8] | 1.34 | 1-64[6] |
| 4 | Commerce | 1.72 | 0-20 | 2.66 | 2-02 |
| 5 | Light Industry | 1.88[2] | 1-21[7] | 2.93[2] | 2-16[7] |
| 6 | Heavy Industry | 2.42[3] | 2-27[8] | 3.88[3] | 4-83[8] |
| 7 | Railroad Property | 3.69[3] | 2-76[9] | 6.05[3] | 4-60[9] |
| 8 | Streets | 19.68 | 17-36 | 31.42 | 28-56 |
| 9 | Public & Semipublic | 3.80[4] | 2-76[10] | 5.81[4] | 3-78[10] |
| 10 | Parks & Playgrounds | 4.78 | 5-64 | 7.78 | 9-51 |
| 11 | Vacant | 36.39 | 38-58 | | |

*Notes:* This graph is based on two tables of land use statistics, one for self-contained cities, one for satellites, prepared in the office of Harland Bartholomew & Associates, city planning consultants, St. Louis, Mo., in 1940, from data collected as consultants to the cities.* (1) Unless otherwise noted, average for 27 cities, ranging in population from 17,000 to 822,000, located between the Allegheny mountains and the Pacific. (2) Average of 25 cities. (3) Average of 21 cities. (4) Average of 26 cities. (5) Average of 15 cities ranging in size from 2,800 to 74,000, mostly located in the north-central U. S., and 3 regional areas (Miami, St. Louis and Los Angeles Co.). (6) Average of 14 cities. (7) Average of 7 cities. (8) Average of 4 cities. (9) Average of 9 cities. (10) Average of 11 cities.

* Somewhat similar graphs and tables were presented by Mr. Bartholomew in "Urban Land Use", in 1938, but were based on about half the number of cities on which the present tables are based. We here repeat our indebtedness to Mr. Bartholomew for making the data available to us.

uses and needs and the extent to which they are already supplied.

There is commonly a surplus of area zoned to provide for business and apartment houses and for industries. "It is not unusual to find 600 per cent more land zoned for business than is used for business."[18] A proper re-zoning of these areas will release more land for residential use. It is therefore in the obsolete areas (largely residential but often zoned to permit other uses) that most of the block rehabilitation may be expected to take place. However, since some of these blocks already contain certain improvements of the more intensive class (business and apartments), some blocks may have to be re-zoned as "transitional blocks," consistent with the present intensive uses and the future less intensive uses, which may apply in different parts of the block; but blocks in which the improvements for the more intensive uses are wholly obsolete, there would be an exception to the rule.[19]

In any city, before going into the details of neighborhood redevelopment rehabilitation and block reorganization, it will be necessary to consider the plan of the city as a whole. Since our zoned cities have disproportionate amounts of land reserved for a few certain uses, and since this calls for a review and revision of the zoning laws, and since zoning is only one of the many implementations for determining the orderly and balanced development of the future city, it follows that the plan of the city as a whole should be reviewed and revised. Aside from housing, any other phase of the city growth which we might analyze would likewise lead us to a restudy of the city plan. The street system, for example, was laid out for horse-drawn traffic, and should be revised for motor-drawn traffic, calling for more by-passes for interurban traffic, circumferential and radial major thoroughfares for intra—urban traffic, some separation of truck and private passenger thoroughfares (particularly in residential neighborhoods and retail shopping districts), provision for parking, auto terminals in business centers, etc.

A city plan is based on an estimate of future conditions and should for that reason be reviewed periodically to determine the accuracy of the estimate, and, to the extent that they may prove inaccurate, the plans should be revised. For most, if not all, phases of the plan, the ten-year census periods would form the logical normal periods for review. Shorter periods would scarcely indicate trends; much longer ones might allow undesirable trends to become established. These normal periods should not preclude re-studies due to some unusual conditions, such as the construction of a state highway along one side of the city, making it advantageous to plan connecting links with the city street system, or an unexpected spurt in the city's growth. Recent slum clearance and neighborhood rehabilitation projects may also suggest reviewing the city plan, though in theory the new work should have been fitted into the plan of future city growth. Such conditions often are unpredictable and consequently may change the data on which the plan was predicated. The adoption of a city plan should lead to its stability, but not to its freezing into a glacier.

If broadly conceived and vigorously executed, such a re-study of our city plans should and would lead to a reclamation and a regeneration of our cities. With their present obsolete street plans, and obsolete patterns of use of the land between the streets, our cities can be neither efficient in use nor economical to administer. We have already indicated that, aside from the needs of the population, the public service cost of obsolete neighborhoods makes rehabilitation or redevelopment a crying necessity. The need to restudy the street system is also of great importance; downtown congestion, for instance, is driving much retail business from the cities to the adjoining suburbs. And so from many points of view our cities must be replanned to the life of the twentieth century. In view of the movement of residential and retail business to the suburb and the simultaneous shrinking of large sums through declining values of real estate and city taxes, the future solvency of the city itself may be at stake. To bring its plan into relation with present-day needs and demands, and to keep it in line with competing communities, is of the utmost importance to every city. How the rehabilitation of blighted areas may be accomplished is discussed in the next chapter.

*Neighborhood Considerations*

In planning the rehabilitation of blighted areas as they exist in most of our American cities we can get little help from precedent. The obsolete areas in the older cities of Europe are for the most part so densely built up with century-old massive masonry buildings that they have not usually seemed to lend themselves to modernization. It is true, however, that in Berlin and some other large German cities, the interior of the blocks have been cleared of buildings, leaving only those which face the street. The "Haussmannizing" of Paris opened up thoroughfares and parks, but was not essentially an organic regeneration of the city as a whole. *See "Housing in France," p. 104.* The problem which we probably will most frequently encounter is very different from that of clearing all the land and starting afresh. For our planning we must therefore endeavor to establish some broad principles of our own and to work out our details in the light of these principles and of specific local conditions. There is, however, a valuable precedent for assembling the properties in blighted areas—the Lex Adickes. *See in "Housing in Germany," p. 96.* This question of assembling the land preliminary to planning is discussed near the end of this section.

[18] Russell Van Nest Black, in "New Jersey Municipalities," March 1934.

[19] For a discussion of transitional areas of zoning see, Arthur C. Comey, "Transitional Zoning," Harvard Univ. Press, Cambridge, 1933.

Logically, as we have pointed out, the replanning of the city as a whole should precede neighborhood planning; but to do that it is necessary to have a knowledge of neighborhood requirements and possibilities. So actually tentative neighborhood studies may be a first step. Moreover, not every city government will be sufficiently enlightened and sufficiently interested in its future to prepare at an early date a comprehensive official plan. Meantime, probably every public utility corporation in the city has a plan looking well into the future, taking into consideration only its own particular interests, which may not or may be at variance with those of the city as a whole. In those cities that do not revise or develop their plans, private owners may have to plan their own block reorganizations, though it will be on a less certain and less advantageous basis, both to themselves and to the city. So we shall look into the physical requirements of rehabilitating the neighborhoods, then into the administrative legislative measures necessary to bring about the changes in such a manner as to conserve the interests of the city.

Here are some of the factors which are at the root of the whole problem of rehabilitation:

(a) The greater speed of the auto over horse-drawn traffic is justification for larger blocks.

(b) The automobile has so congested the streets in the business and other intensively used districts that facilities for off-street parking are often necessary, even where there is control of short-time parking, as by meters.

(c) Automobile compounds in residence neighborhoods are more economical of space than individual garages, and facilitate a better use of the interior of the block.

(d) A shallower depth of house lots than formerly provided is desirable because those who wish to live in near-center areas are not likely to be those interested in extensive gardens, and because the stable, which was one reason for providing deep lots, is no longer in the picture.

(e) The automobile has also completely transformed the traffic problem. In the interest of efficiency, of safety and of a civilized degree of quiet such traffic should be restricted to radial and concentric thoroughfares.

The social advantages which accrue from organized residence neighborhoods (implying areas of one or more super-blocks) we have already pointed out in the chapters on Policy, on Housing in Foreign Countries, and on Health, Mortality and Crime. These advantages can be had in rehabilitated neighborhoods if they can be made to meet certain conditions—the same as are required for a new residence neighborhood. These are:

(a) That it be of such size in both area and population as to permit of the economical functioning of a resident staff adequate to secure the upkeep of the property, the collection of rents and the social objective of a unified neighborhood as described in a previous chapter (*p. 122*).

(b) There must be no nearby heavy or nuisance industries (those producing objectionable smoke, smell or noise).

(c) There must be relative freedom from the danger and noise of through traffic.

(d) About the individual houses or apartments there must be space for ample air, sunlight, a pleasant outlook from those rooms habitually used during the day, and space sufficient for all windows to be so distant from the windows of others as to secure a reasonable degree of privacy. For some proportion of the families there must be a space for flower gardens.

(e) For young children there must be recreation space which they can reach without crossing an active traffic street or other public way, and within easy calling of their mothers.

(f) For older children there must be recreation space which they can reach without crossing a major traffic street.

(g) For the grown-ups there must be out-of-door neighborhood recreation space and facilities for the pursuit of indoor hobbies.

(h) There must be grade schools, easy of access without crossing major traffic ways, except where there are police or other special guards for the children. It is generally agreed that children of grade-school age should not have to go more than one-half to three-quarters of a mile to school.

(i) There must be a convenient center for stores catering to the frequent needs of the family.

(j) Reasonably near there must be places for religious and social activities (churches, movies, dance floors, etc.).

(k) There must be good transportation facilities to the places where the people are likely to work and to other parts of the city.

All these advantages our rehabilitated residential neighborhoods can have—some of them, such as air, outlook, space for gardens, often in less degree than in the suburbs; others often in greater degree, such as convenience to work and to the many social advantages of the urban center. With many people, particularly the elderly and the young couples without children, these advantages will outweigh the disadvantages. In many, if not most cities there is an unquestionable demand for such centrally located residential neighborhoods. The precise form which the re-organized blocks, super-blocks and redeveloped neighborhoods will take will vary with the cities and the neighborhoods within the cities. Our older cities, particularly in the Atlantic and Gulf states, have a great variety of street patterns, both among themselves and within each city, as we shall see later in this chapter in the study of specific neighborhoods.

The conditions within these blocks susceptible of rehabilitation also vary greatly. Some are acute

slums and destined to complete demolition. Some are incipient slums and are in line for rehabilitation, utilizing much of the existing public service facilities and reclaiming some portion of existing buildings through modernization along the most economic lines. This may involve some municipal aid—particularly in the development and maintenance of playgrounds and other social features; but such a municipal investment will be a good one if deficit properties can be put on a municipally self-supporting basis by contributing their share of taxes. Other somewhat better areas, operating on strictly private lines are in a good way to do well under re-organization, particularly with the adoption of a city plan, which should include zoning ordinances based on sound policies of neighborhood stability and balanced land uses. This type of neighborhood may supply the needs of those of the middle income brackets—our A's and B's discussed in the chapter on Insufficient Incomes. In New York City, at various places along the east side, obsolete neighborhoods and former incipient slums have been transformed into prosperous and even fashionable blocks, such as Turtle Bay, Sutton Place and Park Avenue north of the Grand Central Station. Tudor City and Rockefeller Center are examples of completely made-over neighborhoods, largely though not entirely obsolete residential areas. Of these, Rockefeller Center is the only one transformed for business uses, while the other three are redeveloped residential neighborhoods.

Many of the requisite advantages (such as freedom from nuisance industries, adequate public transportation, schools, churches, shopping centers) may be achieved in the act of selecting our neighborhoods for rehabilitation. Our next move will be the widening of the streets which define the neighborhood and serve as the major traffic streets tying in with the rest of the city, thus diverting through traffic from the interior of the restricted area. In reducing the width or suppressing the streets within the neighborhood we shall at the same time increase the space usable for living, indoors and out of doors, and reduce the danger and noise from the street traffic, and incidentally the cost of street maintenance.

*Procedure Under Existing Laws*

We can picture this diagrammatically by assuming, within an old residence neighborhood, a rectangular area three blocks each way, which we will develop by widening the streets surrounding the rectangle and narrowing the streets within the rectangle. This gives us: first, good communication with the rest of the city; secondly, the elimination of danger and noise from the streets within the area. By so doing the whole area will have already become more livable. Our next move will be the advantageous development of the space in each sub-block. The major step to this end is reducing the depth of the back yards to the actual needs of the houses, say to a depth of twenty-five or thirty-five feet, the exact dimension depending on a number of local conditions. The free space between the back yards will then be cleared of all back buildings and fences. In many blocks, especially in the smaller cities, the total space thus cleared will be long enough and wide enough for efficient and attractive development for the recreation of the younger children and the older grown-ups—trees and shrubbery along the back yards, and free space for sand-boxes, jungle gym, wading pool, quoits, hand-ball, hand-tennis, badminton, croquet or other adult games, according to neighborhood tastes. Also at one or both ends of this free space there will usually be space for a garage compound, if needed. Large blocks may warrant subdivision by one or more cross lanes or by culs-de-sac. It is probably generally true that the smaller and more open cities offer the best opportunities for such block rehabilitation for residential use.[20]

In the central one of the nine blocks in our rectangle we shall want to develop a playground for the older children and for the more open sports for grown-ups, space for the *practice* of baseball, of football and of golf, for volley ball, tennis, etc., and, with all these, field-house facilities. A community center with a small assembly room, rooms for sewing circles, men's clubs, rooms for hobbies, and in some neighborhoods a day nursery. All this may sound ambitious and extravagant, but the test is whether or not such a rehabilitation of an obsolete neighborhood can take it out of the red and put it into the black. It may be worthwhile if it only reduces the extent of the red. To make a go of neighborhood rehabilitation it is essential to make the neighborhood an attractive one to live in and to put it on a competitive basis with other up-to-date neighborhoods. This outline of objectives and procedure in rehabilitating our nine blocks, reduces the conditions and the procedure to the simplest terms, and that is true of most of the examples of specific neighborhoods previously mentioned and to follow. The variety which neighborhoods may take is well illustrated by some studies made by the late Henry Wright of a rather open type of block found in New Orleans, Pensacola and some other southern cities, and of a more populous area in Manhattan.[21] (*Plate XXXVIII, p. 150.*)

Of the New Orleans blocks Mr. Wright states: "These lots were arranged to suit the old custom of building the master's house facing the street and his servants' cabin on the rear of his lot. The streets are from 60 to 80 feet wide and occupy nearly 40 per cent of the original land area." All improvement costs of the cross streets must be assessed against the four lots fronting these streets; consequently most of the cross streets have remained unimproved. For those blocks

[20] Considerable data and some suggestive ideas may be found in "Neighborhoods of Small Homes, Economic Density of Low-cost Housing in America and England," by Robert Whitten and Thomas Adams, Harvard Univ. Press, Cambridge, 1931.

[21] From Mr. Wright's chapter on Rehabilitation of Blighted Areas in "Urban Blight and Slums," by M. L. Walker, Harvard Univ. Press, 1938, p. 93.

in which the housing is badly run down and the streets only partly improved, he suggests complete clearance and rebuilding on approved lines, as shown in the plan. In cases of blocks in which the cabins are too numerous and both they and the cross streets badly run down (while the houses on the main street are still in good condition), he suggests the elimination of the cross street between two blocks and redesigning the two blocks as one, showing alternate schemes at the different ends of the block. Several of such expanded blocks might be combined into an organized neighborhood, with all the necessary community facilities.

One of Mr. Wright's studies of a more intensive development was for 9 blocks 200 feet x 800 feet in the upper end of Manhattan, built up with speculative rows of old brownstone individual houses of 3 and 4 stories and "new law" tenements of 5 and 6 stories. The neighborhood was in a state of stagnation bordering on obsolescence, despite the high ground, fine outlook and transportation facilities, all of which made it a natural site for a prosperous neighborhood. "A survey was made of the area to determine the population density, vacancies, tax delinquencies, land values, improvement values and other items that might affect any changes made." A price of $4.80 per sq. ft. was fixed as a fair purchase price for land and as a measure of value for each lot. A ratio was then established between the value of each lot and the improvement on it; thus a ratio of 1:2 means that the improvement value is twice that of the land. Those buildings with a ratio of 1:2 or greater were to be retained or moved. The new plans (comprising 1 sub-block about 450 feet x 800 feet and 2 sub-blocks 750 x 800 feet) after taking out space for playgrounds, schools, churches, etc., show a coverage of apartment houses of 55 per cent (with well distributed open spaces), which, with the same number of families and somewhat higher rents would produce 6.5 per cent income after amortization, in place of the former return of a little over 3 per cent if amortization were allowed for, or of the original 4.2 per cent without amortization.

Until recently there have been two procedures for acquiring blocks for rehabilitation, one by *purchase*, usually of relatively small areas of low-cost houses; the other by *pooling* the interests of the present owners, usually for ventures representing considerable invested capital—a method which as yet is more of a promise than an actuality. Purchase requires experienced judgment of salvage value, astute buying and seasoned experience in rehabilitating old projects. Pooling requires the same judgment of salvage values and in rehabilitating plans, requires diplomacy in adjusting present values and future returns, and further requires the adjustment of the mortgages often involved, plus a large amount of bookkeeping and accounting.[22]

[22] How all this can be handled is shown by Mr. Arthur Holden, F.A.I.A., in "Procedure in Slum Clearance," *Architectural Record*, Mar. 1933, in "The Gabriel over-block #326A," *Architectural Forum*, Jan. 1935.

The stumbling block in the path of rehabilitation by private enterprise has been the assembling of all the property in the area—some one owner, maybe several, usually holding out for an unreasonable price. This, as we will see a little later, led the realtors to seek the right of condemnation.

Pursuing the method of direct purchase, Mr. A. W. Binns of Philadelphia has succeeded in assembling blocks and parts of blocks and making them over into attractive neighborhoods, but not large enough to warrant setting aside recreation space for any but small children. (*Plate XXXVIII, D, p. 150.*) Nor has he concerned himself with organized community life. His operations, extending over ten years, have been in the negro districts, where he has been able to purchase at the rate of $100 to $500 per house, two-story brick houses, run down and often boarded up, but with good walls and structural timber. The grounds are stripped of all but the houses, the houses are renovated, replastered, refloored, equipped with new plumbing, heating and lighting, all of the simplest; the exteriors are stripped of all accessories and whitewashed. Inconspicuous walls, grass and limited planting complete an attractive picture at a total average cost of less than $2500 per unit. He rents largely to the more prosperous negroes, at a reported profit of ten per cent.[23] It was the report of this profit that was largely responsible for turning the tide of his fame as a successful operator into a flood of notoriety, ostensibly emanating from unhappy tenants.[24] This same rehabilitating technique should be wholly constructive when applied to completely organized neighborhoods, to yield limited modest dividends.

It is pertinent to emphasize at this point that the selection of houses for reconditioning and the extent to which reconditioning may profitably be done in any particular house, require judgment based on extensive experience. FHA has issued a number of documents outlining items to be investigated in old buildings; another such list embracing a greater diversity of conditions than the FHA list appears in the *Architectural Record* of May 1940.[25] A technique for determining standards in old houses is suggested in a timely study by a committee of the American Health Association.[26]

In any tentative project the first step is a detailed survey of needs, of costs involved and returns which might be expected. For example, the Holyoke Housing Authority in Massachusetts made such a

[23] Much of the data presented is from the *Architectural Forum* of Sept. 1939.

[24] See the "Amazing Case of Mr. Binns," Tenants League of Philadelphia, 1505 Race St., Philadelphia, March 1940.

[25] "A List for Residential Remodeling," p. 95.

[26] "An Appraisal Technique for Urban Problem Areas as a Basis for Housing Policy of Local Governments. Illustration results from Three Test Areas. A report of the subcommittee on appraisal of Residential Areas. Committee on the Hygiene of Housing, American Public Health Association." Reprint No. 2359 from the Public Health Reports, U. S. Government Printing Office, Washington 1942. A manual on the subject is pending.

survey of what seemed to be a promising group of three blocks of old Company houses; but owing to the high ceilings and a grouping which impeded extensions and other improvements, the results as replanned did not justify the costs. On the other hand, the Chicopee Falls Authority, also in Massachusetts, successfully remodeled a Company project nearly a hundred years old; but these buildings were not crowded together, the floor plans were good and lent themselves to modification; remodeling was realistically limited to simple necessities, and stoves were used for heat. (*Plate II, p. 20.*)

The foregoing procedures are available to private enterprise proceeding under existing laws, the only public coöperation suggested being the possible municipal contribution to neighborhood playgrounds, and the coöperation of the municipality through the City Plan and Public Works Commission in the readjustment of the streets in and about the rehabilitated area. As the Chicopee Falls Housing Authority found the procedure useful, so did many other housing authorities. We have earlier pointed out that urban land values have very generally been kept at artificially high levels through speculation, and in a later chapter we will discuss the possibilities of improving this condition by means of the graded tax system (*p. 190*). We have also emphasized the difficulty of assembling all the land. To remove these stumbling blocks, to bring about a proper re-valuation of the land values and to facilitate rehabilitation in a large way, various measures have been proposed in recent years. These proposals are of far-reaching significance and deserve close scrutiny.

The Home Owners Loan Corporation (HOLC) is interested in rehabilitation because between 1935 and 1940, through foreclosures, it had come into possession of much property in the blighted areas of our cities—77,229 properties as of January 1, 1940. Their policy was to renovate and modernize their properties and then to liquidate by selling at reduced prices; but the fact that they were in blighted areas was often an obstacle in selling them at any price. Besides the properties taken over by foreclosure, they had an equity interest in some 640,000 other properties, many of which were in the shadow of the blight. It was clearly necessary for them to fight the blight. They decided to make a study of a specific area, a demonstration if possible of the application of rehabilitation technique. They chose the Waverly area in Baltimore for their first study, and later initiated studies in the Woodlawn area of Chicago. Under the leadership of the Urban Land Institute local groups have made similar studies in a large number of cities.

The Waverly Area of Baltimore, involving 39 square blocks of residence property "menaced by undesirable elements both from within its own borders and from without," is an old subdivision suffering from competition of nearby more modern suburbs. While the neighborhood is only "menaced" and is still occupied by both owners and tenants of substantial character and showing "considerable evidence of social and civic pride," yet because of the evidence of depreciation in usefulness and property values, affecting the equity of home owners and outside investors, the undertaking is expected to benefit the city at large. In the larger features of planning, the Neighborhood Conservation Program envisions the active coöperation of the City Plan Commission and the Public Works Department, and other municipal agencies with the right of eminent domain; as to details (sprucing up the best properties, renovating or scrapping others, readjusting lots to the new street plan, etc.), it proposes essentially the same technique we have indicated in connection with smaller enterprises. It is anticipated that the plan will be executed by a neighborhood league of property owners, operating under the auspices of a local commission, assisted by official agencies interested in housing. These agencies, including HOLC, have coöperated with private individuals in establishing an Advisory Committee, composed of residents of the neighborhood, representatives of home-financing institutions, civic organizations and municipal authorities. From this committee will come the leaders who will push the work.[27] The scheme seems now to be shelved for the duration of the war emergency. Meantime in other communities, similar programs have been initiated by the Urban Land Institute and a number of reports have been issued. The technique is sound and holds much promise.

A significant study has been made by the Boston City Planning Board.[28] The significance lies in the fact that in the study of a particular area, consideration has been given to all factors involved, social, economic and physical, both from the point of view of city administration and that of tenants and landlords. A comparison was made of four alternate solutions (with a fifth pending), showing the effect of each on the city as a whole, on the populations involved and on the finances of existing and future housing. Detailed income and expense accounts are set up for each solution, including the effect on thirteen municipal departments. The city-wide data collected in the Survey of Costs and Incomes (*see p. 149*), together with special data for this particular area, made possible what is perhaps the most thorough study of urban rehabilitation yet made in this country, which may well serve as an example of sound procedure. It is outlined in the following paragraphs.

The area selected, (17.1 acres in the New York Streets Area, so-called because of the names of the streets) is essentially residential, with schools and a play-

[27] From foreword by John McC. Mowbry, Chairman Advisory Committee, in "The Neighborhood Conservation Program, Waverly Area, Baltimore, Maryland." See Also: "Waverly, a Study in Neighborhood Conservation," Federal Home Loan Bank Board, Washington, D. C., 1940.

[28] "Rehabilitation in Boston," A Progress Report on Reconstruction, Vol. II, May 1943. The City Plan Commission.

ground. On a boundary street is a church, a shop and several small industries, which the studies indicate might, with some repairs, continue in approximately their present use. (*Plate XXXVIII, E, p. 150.*) The remaining buildings, mostly row houses, are of such design and construction and so obsolete as clearly to indicate complete demolition. The streets are narrow and numerous, the lots unusually shallow. The studies indicate that any new housing on the site, however financed, should be the simplest consistent with wholesome living. Thus the capital costs and taxes would be the same for the several alternate solutions. A basic consideration for all solutions was the fact that the area is within walking distance of the central business district and of the city docks and other types of industry, and so potentially available for white-collar workers and for skilled and unskilled labor.

The alternate solutions were: (1) Renting the new houses within the income range of many of the present occupants, implying subsidies. (2) Renting the same housing to a white-collar group or others who could pay a commercial rent, it being assumed in that case that the developing would be done by a Redevelopment Corporation operating under the proposed enabling act. (3) Developing a project in an outlying and less valuable site, for tenants with incomes similar to those of the present tenants. (4) A combination of solutions (2) and (3). A fifth alternative study, begun since the report was published, is the rehabilitation of the buildings on another site, where the blight is less advanced and where the buildings are reasonably sound and worth preserving. There is another possibility, which was *not* considered: that of opening up one or both of the projects to a wider income range, such as those eligible for solutions (2) and (3), with subsidies adjusted to the needs of each family requiring it. Portions of the areas might also be made available for coöperative or mutually owned housing.

The reclamation of our cities is going to be a long process, partly because the public has yet to be educated up to it, partly because legislation must be enacted for the means to accomplish it, partly because of the magnitude of the job. Meantime much can be accomplished by demolishing completely obsolete buildings through a rigorous application of existing laws and regulations and by a further tightening of them, with a dead-line set for compliance. By such a procedure some buildings would be promptly rehabilitated and kept in use for some years to come; others would be demolished.[29] Mr. Herbert Swan points out that a revision of the Multiple-Dwelling Law of New York, which became effective in 1936, requiring fire-retarding of old-law tenements and installing separate toilets for each family, had just this effect.[30] The demolition of occupied residence buildings would obviously have to be accompanied by new buildings elsewhere in the community, probably mostly public housing.

In the past, determining what was "standard" and what was substandard among obsolescent dwellings has been a somewhat fortuitous process. This situation has been relieved by a timely study of the committee on the Hygiene of Housing of the American Health Association, which has established a series of criteria for the entire residential environment.[31]

*Tying In With Existing Plans*

As we stated at the outset, logically the planning of neighborhoods should be preceded by planning the city as a whole. Beyond this, city planners have long envisioned the metropolitan area as the logical unit for urban planning. By metropolitan area we mean the central city, its immediate suburbs and, in case of the larger cities, satellite cities or towns and "dormitory" communities—those in which commuters to the central city make up an appreciable part of the population. The difficulty of such planning is that each satellite town, and often each suburb, has its own corporate entity and not all its interests are tied up with those of the metropolis. Often there are fields of rivalry; metropolitan plans extending into such territory have no authority. To meet this condition various types of legislation have been suggested, which are discussed in the following paragraphs.

Eliel Saarinen,[32] after pointing out the disastrous effects of our inadequate city plans, or the lack of them, suggests a system of "organic decentralization" in which the existing city is to be broken down into relatively small communities, separated by open areas for recreation and parkways, with similar new communities developed in the outlying areas—an organized group of garden towns, or little Radburns. The organization of the communities he bases on two ideas: (a) That the activities of the people are of two kinds, "everyday activities" and "casual contacts"; hence, to avoid loss of time in daily transportation and so gain time for cultural pursuits, people should live within walking distance of their everyday activities or occupations, although for their "occasional contacts" it would not be objectionable to travel farther; (b) That a system of small communities makes possible greater flexibility in the development of the city, and contributes to quiet environments, which Mr. Saarinen holds to be of vital importance. But he goes further; he would plan many, if not most, of the communities as residential areas in which there would be some occupational center. There would, however, be special areas near the center for concentrated commercial and cultural activities, and in the suburbs special areas for heavy industry. Within the communities the vehicular traffic would be only that needed by the locality. Through

[29] An exploration of the essential principles in such a procedure is found in "The Improvement of Local Housing Regulations Under the Law," committee on Hygiene of Housing, American Public Health Association, 1942.

[30] "The Housing Market in New York City," by Herbert Swan, p. 73, Reinhold Publishing Corp., 1944.

[31] See footnote 26.

[32] "The City—Its Growth, Its Decay, Its Future," Eliel Saarinen, Reinhold Publishing Corp., New York, 1943.

traffic would follow free ways in the open spaces. All this is not unlike the plan of Amsterdam, described on p. 75.

Such a plan would be brought about gradually over a long period of time, and would involve types of legislation which we shall discuss presently. In addition, as Mr. Saarinen sees it, it would involve legislation to provide for a revaluation of property, on the basis of its earning capacity, with the right of the municipality to exchange municipally owned suburban for other privately owned central property. That compulsion is contemplated is not made clear. The details of such legislation are not suggested. In fact the whole scheme is presented in its broadest terms and with a minimum of controversial details.

As we pointed out in the chapter on Urban Growth, the city is essentially a biological phenomenon. It is a characteristic of the more highly developed organisms, typified by man, that they are made up of inter-related, well-defined parts, and that they develop by simultaneous and balanced growth of all these parts. Thus the idea of basing our city planning on such organic lines as we have suggested, or as Mr. Saarinen suggests with greater boldness, seems fundamentally sound and timely. The outstanding weakness of most of our modern planning has been the failure to break down large-scale plans into component small cohesive units, in scale with daily human activities. The Roman *castrum*, which was the model for Roman colonial cities, followed the principle of the army organization, each unit being subdivided into smaller units, each with its special function. It was this principle which led Napoleon to "zone" certain of his conquered German cities—one point of departure for our American system of zoning. Such units make for flexibility in growth as well as for efficiency. In a previous chapter (*p. 122*) we have shown the social importance of the small community as a unit in the larger community, which is an essential in Mr. Saarinen's scheme and in any sound plan.

## Redevelopment Legislation, Enacted and Proposed

### *Municipal and State Legislation*

To check obsolescence and to rehabilitate obsolete neighborhoods, the National Association of Real Estate Boards in 1933 prepared a model State Act to authorize "Neighborhood Protective and Improvement Districts."[33] These areas, which are constantly growing, they estimated to have an assessed valuation of 40 million dollars.[34] Objection was raised to the proposed act on the ground that the initiative in designating areas for improvement came from private groups, and that special privileges and dispensations were to be afforded the property of these groups. In 1940 the Association sponsored an independent research agency, the Urban Land Institute, whose membership is drawn from a wide range of professional and business groups. In December, 1941, the Institute issued to its members a confidential study and proposal for Rebuilding Blighted Cities,[33] made by Alvin H. Hansen, Professor of Economics at Harvard University and special economic advisor to the Federal Reserve Board, and Guy Greer, senior economist to the same board.[35] This was followed by several widely circularized releases summarizing the principal features of the report.

Comparing the reports of 1935 and 1941, it is pertinent to point out the great strides that were made in thinking during those six years. Notable is the recognition that "Planning must become a dynamic function of government"; that "It is beyond the powers of private effort to assemble sufficiently large areas in blighted districts to create a new neighborhood environment"; "that it is essential that there be local land commissions with metropolitan-wide jurisdiction to assemble the land, and a federal land commission to extend federal grants and credits to the local commissions"; that "local taxation of redeveloped areas be assessed on valuations related to income and utility." We shall have more to say about this a little later.

In New York State, legislation was enacted in 1941, providing for the establishment of rehabilitation corporations and giving them the right of condemnation within the areas of their operation—after they have assembled the 51 per cent of the land valuations required by the condemnation law. This right is based on the claim and the declaration in the law that the rehabilitation projects are public utilities essential to the interest of the general public. Railroads and many other corporations supplying the public with essentials of modern community life have long had this right. The legislation also provides for a write-down of property valuation, and for no taxation during the initial years of operation. New types of legislation appear in 1945: a) to make the housing authority the development agency, b) to establish a new agency to acquire land and sell or lease it.[35a] New York State has passed an act authorizing insurance companies to participate in rehabilitation of areas approved by the city plan commission. Since all this legislation came after the impact of the war, we have no chance to judge

[33] Address, 22 West Monroe St., Chicago.

[34] To us the figure seems reasonable enough. We estimate that there are 6 million substandard urban family units (graph VI); the average cost USHA units, including clearance, building and site improvements was about $4,500 on central and outlying sites, making the replacement cost of the 6 million residences 27 billion dollars, which would probably be not too far from the assessment or condemnation value. It seems reasonably probable that the value of buildings of all other types would amount to 13 billion dollars.

[35] Full support of the report has been pledged by the Committee on Housing and Blighted Areas of the Nat'l. Ass'n. of Real Estate Boards, p. 3, ULI News Bulletin #4, 1737 K.St., Washington, D. C.

[35a] "Features of Typical Redevelopment Legislation", Urban Land Institute, Washington, 6, D. C., consists of tables analyzing the three types of legislation. An accompanying statement lists the states applying for the different types of legislation and gives the status as of May, 1945.

of its efficacy except in the case of the proposed "Stuyvesant Town," described in the chapter on New York City, and commented on in the chapter on Policy. Such laws are, however, a recognition of the seriousness of the problem of urban rehabilitation. In the chapter on Holland we noted that in that country the right of condemnation was granted to "public utility housing corporations," but with municipal control of the standards of housing within the area involved.[36]

It is significant that the proponents of much of the legislation of 1943 evidently sensed danger in passing on to redevelopment corporations the right of condemnation, a trend evident in the Maryland Act, in the bills proposed by the City of Chicago, by the District of Columbia and by California. As a precaution against "bailing out," California proposes to prohibit the sale of any property, acquired under the Act, for less than 90 per cent of its actual cost.[37] The Maryland Act reserves the right of condemnation to a redevelopment *commission*, whose function is to assemble the land and then to lease or sell it to the developers.[38] The proposed Massachusetts legislation would make it necessary for the development company, in floating its securities, to offer them to the owners of the property within the development area, each of whom is privileged to buy securities up to the balance of his property and for which he may pay by a deed to his property—a precaution against the objection that condemnation might be exercised to the benefit of buyers and to the detriment of sellers.[39] On the other hand, New York has modified earlier legislation so as to offer greater inducements to redevelopers—of which more details are given in the section on The Case History of New York City (p. 6).

To prevent "bailing out" and the possibility of the redeveloped areas reverting to slums through speculation is of vital importance. To this end Alvin Hansen, a prominent supporter of redevelopment, thinks the municipality should retain the right to repurchase at the sales price.[40]

The Committee on Post War Housing of the National Association of Housing Officials is more specific on this point.

"Retention of control by the public is essential if a recurrence of the conditions that caused the blight in the first place is to be forestalled, and if changed conditions are to be met effectively as they occur. Retention of control should preferably be by retention of title. Then the parts of such areas that are designated for redevelopment by private enterprise would be made available by long-term leases from the public agency holding title. Such leases should contain provisions for recapture, on fair terms, in the event that changed conditions require it.

"It may be found in some cities that outright sale will be preferred to long-term lease—for example, with respect to the use of urban redevelopment procedures for reassembling the land in lightly developed outlying subdivisions that have 'gone sour.' If sale instead of lease is to be permitted at all, it should be only if it can be done in such a way as to leave the public with, in effect, the same controls as if title were retained in the public. This would undoubtedly require not less than that there be entailed on the land (1) provision that all development shall be completely in conformity with publicly prescribed plans for the use of the land, the density of occupancy, land coverage by buildings, and the site layout or the area; (2) establishment of limits of life of structures; and (3) provision for recapture of title."[41]

After the right of condemnation was granted by several state laws, it became apparent that if all the blighted areas of cities were to be redeveloped, the loss of values due to a write-down would be so great as to raise a new problem—who would finance the loss? In the latter months of 1941, almost simultaneously there appeared a Handbook on Urban Redevelopment for Cities in the United States, issued in November 1941 by FHA, and the ULI Report on Urban Rehabilitation and Housing of December 1941, already referred to. For solving the financial as well as other problems, the two documents suggest procedures which are strikingly alike. There are, however, certain important differences, which arise from the fact that the ULI membership is drawn largely from groups having a heavy financial stake in the blighted areas, whereas the FHA approaches the problem from a purely civic point of view. The FHA report is the more precise in its proposals, and outlines the steps and the machinery necessary to carry them out; it is in effect a handbook of policies and procedures for this special type of planning.

*Federal Participation.*

In both documents the suggestion that is novel to this country is the establishment of *a real estate agency* for the municipality and a corresponding agency in the federal government, through which loans or grants might be made to agencies of the municipalities; that the local agency be granted the right of eminent domain to condemn land, built upon

[36] An interesting analysis of the needs to be foreseen is such legislation as found in "Urban Development Laws and Proposals," a summary of the essential features, and a comparison of proposed and existing legislation as of Jan. 1942, prepared for the Advisory Committee on Urban Rehabilitation by the Housing Association of Metropolitan Boston, issued by the City Planning Board of Boston, 1942.

[37] "Redevelopment Legislation in California," L. Dening Tilton, in "*Tomorrow's Town*," Nov. 1944.

[38] Baltimore City Urban Redevelopment Act, Chapter 664, Code of Public Local Laws of Maryland, June 1, 1943.

[39] An Act Relative to Certain Urban Redevelopment Cooperations under the Control of the State Board of Housing, In "Rehabilitation in Boston". Vol. II *op. cit.* p. 48.

[40] In response to a question by this author at the national conference of the National Committee on Housing, Chicago, March 8, 1944. "Proceedings," Nat. Com. Housing, 512 Fifth Ave., N. Y., p. 55.

[41] "Housing for the United States After the War," NAHO, Publication No. H-193, Chicago, May, 1944, pp. 38–39.

or vacant, within or beyond the city limits, and that such land may be sold, traded or leased when in the public interest. The FHA report, however, does not consider sales for redevelopment to be in the public interest. While recognizing the need of such a body for acquiring land for *all* municipal purposes, the *immediate* objectives with which these reports are concerned is to establish a method of assembling all the necessary land for rehabilitating or for redeveloping blighted areas. We shall have more to say about this a little later.

Both reports recognize that it will be necessary to write down the values of many of the properties before they can be redeveloped, and hold that this loss in values will have to be sustained by the public, because the authors see no other way to finance it and because it has its origin not so much in the fault of present owners and municipal authorities as in the change from the old way of living to the new way—in short, through an obsolescence due to the march of civilization, as typified by the effect of the automobile on transportation. So great will be the loss that both reports suggest the need of the *Federal* Government to aid in the financing. Justification for this they find in the fact that "more than half the population of the country is directly involved and the welfare of the entire national economy is at stake" and because it is a step toward "cleaning up the social and economic mess left by the past generation, for which society as a whole may reasonably be blamed."[42] To the extent that the blighted areas are a result of the march of civilization, "Society as a whole may reasonably be blamed"; but we have previously shown that aside from the normal advance of civilization, speculation in the land has played a large part in creating blights. Much of the land is still held by these same speculators, by those who issued mortgage loans at the speculative values, or by those who bought from them with their eyes open. Obviously in devising methods for refinancing, a procedure must be found whereby the public will not be bailing out these speculators on their unprofitable holdings—unprofitable because held at inflated valuations. The depression which began in 1929 was the result of an "economic mess left by the past"; but those who found themselves holding investments at inflated values accepted as a matter of course losses which were often disastrous. That is a risk which goes with speculation. "Society as a whole" may be to blame, but the blame and the responsibility can be apportioned, as we shall outline presently. First a brief review of the facts.

Since most of our cities and states have tenement house laws and regulations requiring certain standards of safety and sanitation, the renting of tenements below this standard has been in violation of the law.[43] Municipal authorities have not enforced closing or demolition because there has been a lack of enough safe and sanitary buildings to house those who would be dispossessed if the present quarters were demolished. Unfortunately by so acting they have given the occupancy temporary legal sanction. Since under the law the buildings were due to be demolished, logically they could have no value other than that of salvaged material; yet the municipalities continued to tax not only the land but the buildings, presumably on the basis of the returns from the rents of overcrowded tenants, thus again emphasizing the temporary legal sanction.

When USHA began slum clearance and rehousing the temporary sanctions closed, to the extent that demolition proceeded according to the formula of the United States Housing act, requiring "equivalent elimination." It may not at first appear unnatural that, after years of sanction of use of these buildings by the municipality, the owners should feel resentful of demolition. But the simple facts are that those who acquired them either for speculation or investment did so in full knowledge of the law. Any individual or institution which made a mortgage loan on these properties also did so with its eyes open. Sound prudential policy on the part of the mortgagers would have required (a) that the owner maintain the property in accordance with the law; (b) that the loan be amortized over a period of years determined by the age and other conditions affecting the use of the property. But such was not the policy.

During the depression of the early 1930's much of this property came into the hands of the mortgagees, through foreclosure. Many of the mortgagees are large financial institutions. Again it may seem natural that this group should oppose further operations of public housing which might lead to the condemnation of tenements which might yield good returns. But these financial institutions have a stake in the nation and in the municipalities as a whole which is far greater than their stake in slum properties. It would seem that these institutions must eventually realize the handicap which the slums present to the health, efficiency and loyalty of something like a third of our population; that it is not enough to eliminate these deficit areas; that supplying decent environment for the population is the very essence of the problem. Furthermore, these institutions must recognize that they are responsible for their investment in these slum properties. Can it be that fair-minded men, trained in adjudicating financial matters, can seriously ask the public to underwrite the entire loss in their slum holdings?

It is true that the older areas of our cities have become obsolete largely because of the development of modern transportation and because of a lack of long-

[42] "Urban Redevelopment and Housing," Alvin H. Hansen, and Guy Greer, Urban Land Institute, Chicago, 1941, p. 6. A pamphlet under the same title and by the same authors, identical in most of its contents, was issued by the National City Planning Association, 1721 I Street, Washington, D. C., December 1941; quotation found on page 7.

[43] See footnote 29 on p. 17; also Straus *op. cit.*, pp. 78–82, including footnote 14.

range physical and financial planning. But this change began decades ago and has been gradual. A mortgagee who had observed normal prudence in requiring upkeep of property and amortization of his loan would not now be embarrassed. This principle applies not only to residences but to all types of real properties. By the same reasoning the municipalities, through lack of prudent foresight, are in part responsible for the obsolescence of the physical city as a whole—street systems, playgrounds and parks, sites for schools, libraries, etc. Thus both the public and the investors and speculators in slum properties should assume a share in the financial burdens involved in redevelopment. The Federal Government has not been a party to this lack of foresight, unless it be in the failure to have a national plan for the economic and social development of the nation.

Because of the foregoing facts an equitable formula for the distribution of the cost would seem to require (a) that the municipality bear the expense of all public works, including streets, parks, playgrounds, sites for public buildings, etc.; (b) that the municipality absorb in whole or in large part the write-down of land values to the extent that values may be re-established below the average value at which the city assessed them during the period in which they were held by the present owners; (c) that the property owners absorb all losses from obsolete buildings or other obsolete or temporary improvements on the land; (d) that since the federal government has had no responsibility in the obsolescence, it cannot be logically expected to share in the expense of actual reclamation; but that, since the Federal Government has an important stake, both economic and social, in the prosperity of the urban population, it has a concern in revitalizing the cities, and hence should aid in research leading to better planning; moreover, it could without great expense, if any, make loans on easy terms, offer tax incentives (but not of the kind some have proposed, as noted presently) and insure municipal redevelopment bonds for which there would be adequate security.

Since public interest is the justification for public aid to redevelopment and rehabilitation projects, the following principles also seem reasonable: (a) such projects should fit into the general development of the overall urban development; (b) that condemnation should be exercised only by the municipal authority, so as to assure that the authority may not be abused in the interest of the developing investors—e.g., as for "bailing out", or for the exercise of an unfair advantage over the sellers, thus taking over property for their own gain at the expense of others; (c) that ownership of the land remain with the municipality and be leased under such terms as will assure the perpetuity of the original intentions of the projects—except possibly, as cited by the NAHO committee, in special cases which can be safeguarded by appropriate restrictions in the deed.[43a]

Suggestions for various types of loans, "advances," grants, and "tax incentives" for urban redevelopment continue to be made. Some of these are included in the Thomas bill and the Wagner bill, still pending in Congress (as of August, 1944).

The basic justification claimed for loans, grants, and "advances" from the Federal Government is that the job is too big for the municipalities, that the urban areas contribute the greater part of the federal taxes and the impression that the income tax which is the most productive source of revenue is preempted by the government. Actually, however, some states and municipalities tax incomes (*see p. 190*) and there is nothing to prevent any others from enacting the necessary legislation, if they desired it. Whether or not the citizens in the municipal areas are now the chief contributors to federal revenues, they would only add to their burdens if the stupendous job of financing all urban developments were added to federal expenditures. It would be a roundabout way for the urban taxpayer to get money for urban improvements. Bonafide, adequately secured long-term municipal *loans* probably could be had on better terms from the Federal Government than from the state or from private source. Federal funds for planning, research and grants-in-aid for planning by municipalities would do much to stimulate the initiation of planning and would be only a slight burden for the Federal Government, and taxpayers in general.

The aim of "tax incentives" is to draw private capital into the redevelopment field by remitting taxes. It has been suggested that the Federal Government, as well as the local governments, so remit. If the capital thus raised should constitute any large portion of the total need for nation-wide urban rehabilitation, it would materially reduce the tax returns to the Federal Government, and would mean increasing the rates or finding new items to tax. Unless the farmers are called to the rescue, there is no one to pay the cost of redevelopment but the city people. Any suggestions which attempt to dodge this simple fact would only delay an effective solution.[44]

*The Place of Public Housing in Redevelopment*

Interesting general suggestions and comments on housing policies are found in both FHA and the United Land Institute (Hansen-Greer) reports. The Hansen-Greer report, for example, thinks that there is a place for local housing authorities in rehabilitating residential areas. The Handbook seems to suggest that they gradually be dispensed with and recommends that the

[43a] "Housing for the United States After the World War"—NAHO, May 1944, p. 38. This is a judicial and scholarly statement of outstanding importance.

[44] A lively discussion of this subject took place at the National Conference of Post-War Housing in Chicago in March of 1944 and is recorded in the "Proceedings," *op. cit.* The groundwork was laid by Professor Leland, followed by Hugh Patten, Professor Hansen, Herbert Nelson and Hugh Pomeroy, and discussion from the floor.

siting of all housing projects, their population characteristics and financing should be brought into close harmony with the master plan of the city and with the various other work projects involved in the plan; that public housing (*i.e.*, that which private capital does not provide) be constructed in the amount and kind required, but without subsidy, to be leased or sold to private corporations and to be operated as private rental housing, and that families of sub-standard income receive the assistance needed by each for shelter, in accordance with such policies as the city may adopt, the assistance being in the form of *certificates* to the landlord; that families thus assisted shall share with the rest of the citizens of the community the opportunities and difficulties of finding decent dwellings; that public housing may be leased or sold to redevelopment corporations.[45]

In the FHA Handbook there are references to the need of co-ordinating with public housing authorities,[46] but under the method suggested, with redevelopment corporations owning and operating former public housing projects and by inference those of the future, if any, and with subsidy a part of income relief, it is not apparent just what the function of a housing authority might be.[47] Even in Sweden, where tenants so extensively operate their coöperative housing without profit, it has been found necessary to have a separate public organization to supply and operate housing for families with deficient incomes. The same is true in Holland and in England, the countries in which the program for low-cost housing has progressed furthest and where it has been most successful. In Paris, where the attitude of land owners was an especially serious hurdle, the production of low-cost housing was seriously retarded, and slum clearance hardly made a beginning. In any low-cost housing built or operated by corporations operating for investment, it would seem inevitable that concern for property would exceed concern for humanity, that concern for investment in buildings would exceed concern for investment in citizenship.

The Hansen-Greer report suggests only that "the organization of USHA could well be adapted to the purposes of redevelopment. Especially since the introduction of graded ["adjusted"?] rents, it would seem that the system is about as good as can be devised, once the basic principle is accepted of subsidizing the housing project itself rather than the tenants who are receiving the aid."[48] This suggests a possible broadening of the scope of the housing authority to include the population of rehabilitated areas. For a further discussion of this issue see pp. 51, 133, 138.

The suggestion of the Producers' Council[49] is that all existing public housing be eventually disposed of to private enterprise, and that, to supply the future housing of those families unable to pay an economic rent, every effort be made to rehabilitate the old housing vacated by those who can afford better housing,[50] and that only to the extent that these efforts fail should there be built any new housing requiring a subsidy. To this end the Council suggests that there be a unit of the general municipal department charged with all or most of the regulation of buildings, and that this municipal unit have the "authority to inspect and approve the housing units occupied by families on relief, both with respect to the rental rates and the quality and physical condition of the accommodations, and to supervise and approve the services of landlords to tenants in all cases where public funds are used to pay all or a part of the rents. In addition the board would have the authority to rent, buy, sell, and repair real estate under certain conditions . . .". The "rent certificate" would be used to meet the income deficits of tenants—the "families on relief."[51]

To understand the point of view of the Council it must be borne in mind that as a group they are investors, looking after their investments, though not without awareness of public interests. Thus: "The 'housing problem' is recognized as a serious public issue. The problems of shelter are personal and family concerns, in which the interests of the public come first. In this sense 'housing' is considered to be far more than a market for business."[52] "The problems of housing, as conceived in the proposed program, are not considered to embrace social welfare and family problems. Many social problems suggested by certain connotations of the word 'housing' are not included in the zone of action covered by the program. There is a recognition, however, that the two zones overlap. Consequently, some of the specific proposals are made for the express purpose of meeting aspects of the social welfare problem."[53] The latter reference is doubtless to "rent certificates" to meet insufficient incomes. But: "The immediate goal of postwar planning is employment. . . . The further goals are related to the sustaining of activity."[54] From our point of view any public housing policy which puts financial investment ahead of social investment, investment in citizenship, misses the point and dodges the essential issue.

*Land Assemblage Agencies, Local and Federal*

To establish the land agencies and in most states to establish the re-development corporations which have been suggested, legislation would be required by the municipal and by the Federal Government.[55]

[45] "A Handbook, etc." *Op. cit.*, pp. 351–353.

[46] "Handbook, etc.," *op. cit.*, par. 346–350.

[47] See discussion p. 140.

[48] "Urban Redevelopment," etc., *op. cit.*, p. 69.

[49] "Toward a Postwar Housing Problem," *op. cit.*, p. 53.

[50] See discussion of "filtering up," p. 151.

[51] See page 140.

[52] "Toward Post War Housing," *Op. cit.*, p. 5.

[53] *Ibid.*, page 6.

[54] *Ibid.*, page 4.

[55] A number of bills authorizing federal aid in urban redevelopment have been introduced into Congress, notably the Thomas bill, referred to on p. 163.

As to the general need for new implementation, the FHA report states that up to the present all the "customs and legal procedures have facilitated the breaking up processes, and have done nothing to facilitate the re-grouping of parcels into large tracts." The report is quite definite in specifying that local planning agencies should *be required to prepare a master plan*, which should include a plan of land use and control, designating the potential revenues to be derived from the various areas which are ripe for rehabilitation and development. This requirement should create a stimulus for achievement of sorely needed urban master plans. In recommending that land acquired be leased for long terms and in other ways also, it seeks to assure that the areas will not revert to obsolescence. Aside from the function of the Housing Authority, there are three other major points on which the FHA and the ULI reports disagree, at least in emphasis. (1) The ULI report suggests the possible advantage of setting up, under legislative authority, an independent planning body to function for the entire metropolitan area. (2) The ULI suggests the possible sale of assembled properties to private rehabilitation corporations; FHA insists on long term leases only. (3) FHA stands for taxation of land owned by the municipal real estate agency; ULI suggests partial remission of taxes on land purchased by rehabilitation corporations, as is provided in several state rehabilitation laws.

With regard to the questions of who shall do the planning, of sales versus leases, and of taxation: City planning at its simplest covers a tremendously wide range of interests—transportation by land, water, and air, all utilities, the location of all public structures including schools, hospitals, fire and police stations, and recreation; to add a huge real estate bureau to its activities would endanger subordinating its original function. An important attribute of the planner is a judicial point of view which keeps an open mind in weighing the merits of all phases of his work. The experience in all fields of construction has clearly shown the need of keeping planning functions and executive functions separate, just as the architect and the engineer must keep out of contracting. As to the question of sales versus leases, European experience indicates both the feasibility and the desirability of leases as a general policy, but not as an inflexible rule. It may be recalled that at Hampstead Gardens leases were originally for 100 years and were later extended to 1000 years.[56] The test of the validity of the principle of selling would seem to be its ability to meet the provision of adequate safeguards against a return to obsolescence and to speculative values of the land. The right of the cities to re-sell property, under certain legal limitation, seems to us almost necessary, if the cities' hands are not to be forever tied. The right of excess condemnation and re-sale would be an invaluable tool for city planning, and this is provided for in the FHA Handbook suggestion. The large amount of land which would come into municipal ownership would seem to make it impractical to exempt taxes except for relatively short periods—so long as the revenues of cities are dependent solely on taxes from real property.[57] Even in its public housing, Great Britain has found it unwise to remit taxes.

*Further General Considerations*

That the rehabilitation of cities is tied up with an indefinite number of economic and social problems, as are all the problems of housing and planning in general, is well demonstrated in the report of a conference on Rehabilitation by the American Society of Planning Officials, prior to the specific proposal for federal participation.[58] Some of the points there brought out, not previously specifically mentioned or emphasized in our discussion are: That people living in residential areas where the blight is worst are socially and economically incompetent and that definite provision for re-housing them must be made when demolition is planned; that the speculative real estate operator has been a contributing cause to the blight; that rehabilitation legislation should prevent his reappearance, and that one means to this end is to limit the returns on the capital invested, seeming to imply that there be no profit on borrowed capital; that great combinations of corporate trusts have in many instances had an important effect on blight (instances are cited); that because of the stake which large financial institutions have in the city as a whole, they might with reason advance money at very low interest rates (possibly such rates as they are accepting for housing authority bonds); that in any area, the holdings necessary to permit the right of condemnation should be based on both the area and on the assessed valuation; that a fundamental problem is how far restrictions may go and still hold the interest of private investors; that the whole question of private property rights as against public property rights is something that government should consider, perhaps by a change in the Constitution;[59] that government has a responsible share in creating blighted areas, as witness the laws cutting off increase of population through immigration. To this last point we might add the lack of laws preventing initial unlimited immigration.

Another interesting discussion of some of the specific problems is found in the April 1942 issue of *Planning and Civic Comment*, and includes comments on the proposal for federal participation.[60] Thomas

[56] See chapter on England p. 59.

[57] Swan says "As a general proposition tax exemption should be used most sparingly, and then only when the effect of its operation is clearly visualized," "The Housing Market in New York City" Reinhold Publishing Corp., 1944.

[58] Conference on Planning Problems—Defense, Urban Rehabilitation—Chicago, Feb. 13–14, 1942. Proceedings, A.S.P.O., 1313 E. 60th St., Chicago, Ill.

[59] This suggestion was by Mr. Frederick A. Delano, who in 1937 in an article in *The American City* (Jan. issue) suggested fiscal invasion by the federal government into slums and blighted areas.

[60] Official organ of the American Planning & Civic Association, published quarterly, 901 Union Trust Building, Washington, D. C., p. 13.

Holden, F.A.I.A., President of F. W. Dodge Corporation, views the subject from the point of the rehabilitation corporations and stresses the necessity of deflating present valuations, of tax exemption in the initial years, and of the right of purchase by the corporations if redevelopment is to attract capital. Harland Bartholomew, past president of the American Institute of Planners, welcomes the FHA program as aiding cities to solve their problems on their own initiative in contrast to some former FHA procedures, which he thinks tended in the other direction. The broader aspects of the subject are discussed in a report of the Committee on Urban Land Use of the American Institute of Architects,[61] of which Mr. Frederick Bigger is chairman. He also is credited with the responsibility of preparing the FHA Handbook.

Bearing on federal taxes in support of various urban improvements, a report of the National Resources Planning Board states: "Studies in other cities might reveal, like a recent study in New York City, that the city's expense budget was equaled by the expenditures made within the city by other units of the government—Federal, State and special authorities. None of these other expenditures was supported by property taxes. If this condition is generally true, it demands that the Federal and State Governments, if only in the interest of effective use of funds derived from their whole constituencies, should evidence greater interest in efficient and orderly urban development and conservation. It also suggests that indirect ways have been found for tapping the tax-paying ability of those who have fled beyond municipal boundaries, while still earning their livelihood in the central city. These funds should be made available in the slums not only for relief payments, but for more foresighted thorough-going resurrection of these areas. State and Federal Government departments are not organized to provide, alone, unified redevelopment of entire areas. In any redevelopment, municipal government must plan an important role, *supported by a balanced diversified tax system in which the Federal and State Governments must play their part.*"[62] (Italics are ours.)

*Precedent for Municipal Ownership of Land*

The principle of municipal ownership of land for the broad purposes of the city's growth finds precedent in the countries of northern Europe, as pointed out in previous chapters. The special right to condemn built up areas finds an early precedent in the legislation of 1800, referred to in the chapter on The Case History of New York City. Washington, D. C., by the act of 1802 "may purchase and hold real and personal property or dispose of the same for the benefit of the city," which would seem to permit excess condemnation and resale.[63] Its earliest European precedent probably is the rebuilding of the older area of Hamburg, at the turn of the century, following a survey conducted under a law passed in 1893. It is interesting to note that for some years before it was finally authorized there was agitation for replanning this area, the urgency recognized being the congestion of traffic and business. But the step was not authorized until after an epidemic of cholera broke out in the over-crowded housing; then the urgency became the proper housing of the population, and the work was put in the hands of the newly created and significantly entitled Commission for Better Living Conditions, which acquired all the property, designated the buildings to be destroyed or improved and set the standards for the new building. All land, except that put to public use, was resold by the Commission, and for that it was inundated by a torrent of public criticism. Except for the public improvements involved in a new street plan, the improvements were undertaken by private owners, without public financial aid.

Following closely on the Hamburg legislation and accomplishment, came the Lex Adickes, at first applicable to Frankfurt-am-Main and later to a number of other cities; in 1913 it became applicable to all Prussia.[64] This, in essence, provides that if it be to the interest of the municipality, it may expropriate and redistribute land in badly planned and plotted areas; that requests for so doing may be made either by the Town Council, or by interested owners of land who together own more than half the land in question; that, in the redistribution, the community must have assigned to it land for public ways to replace those absorbed, and each private owner must receive land as near as possible to the position of his original holding, differences in values between the original and the distributed holding to be settled in money; that an expert commission make all adjustments. This legislation was for dealing with the obsolete areas of cities. For their normal growth and development, German cities for untold centuries have pursued the policy of acquiring large tracts of land within and beyond the city limits. As we have pointed out in the section on housing in northern European countries, since early in this century most other countries in northern Europe have pursued this policy, which has at least prevented the cities from being strangulated by a cordon of misconceived surrounding suburbs.

On the principle of public rights in privately held property Alexander Hamilton observed: "Whenever, indeed, a right of property is infringed for the public good, if the nature of the case admits of compensation, it ought to be made, but if compensation is impractical, that impractibility should not be an obstacle to essential reform."[65]

Also bearing on this problem is the relation between land values and the degree of intensiveness

[61] Octagon, December 1941, pp. 15–20; 1741 New York Ave., Washington, D. C.

[62] "Better Cities," by Charles S. Ascher, National Resources Planning Board, April 1942, p. 12.

[63] "City Planning and Housing," Werner Hageman, Architectural Book Publishing Co., N. Y., Vol. 1.

[64] See in section on German housing, p. 96.

[65] "The Price of Liberty," quoted by Werner Hageman in "City Planning and Housing," Architectural Book Publishing Co., Vol. I of Text, p. 129–30.

of the land use, a discussion of which is found in the chapter on land in its relation to the cost of housing.

*Essentials of the Uthwatt Report and Their Possible Application in the United States.*

Does the much-discussed British report on land control by the Hon. Mr. Justice Uthwatt's committee hold any suggestions for us? The report assumes a national planning agency, recommends specific controls for all lands, both urban and rural. Specifically, it recommends "the immediate vesting in the State of the rights of development in all land lying outside built-up areas (subject to certain exceptions) on payment of fair compensation, such vesting to be secured by the imposition of a prohibition against development otherwise than with the consent of the State, accompanied by a grant of compulsory powers of acquiring the land itself when wanted for public purposes or approved private development."[66]

These recommendations might be stated in terms of the procedure in the United States, as follows: (a) That land in rural use, including that surrounding cities, be zoned initially in its present use, and that other uses be permitted only as the land is needed for such uses in the public interest. (The "payment of fair compensation" for limitations in the use of land is not recognized in zoning practice in this country, on the theory that any increase in potential future value is an unearned increment created by urban life.) (b) That the right of eminent domain be exercised in the acquisition of rural land needed in the public interest, including urban development. (c) That there be established a uniform and equitable policy for determining land values (important in connection with the proposed compensation for the restrictions of zoning and acquisition under eminent domain). (d) That land coming into public ownership be leased rather than sold. (e) That the application of these controls be vested in a central or national planning agency.

The essential elements of these suggestions are embodied or implied in the proposed urban land commissions which we have been discussing. Among the proposed controls by a central or national planning agency, are some which in this country are properly the function of the several states.

Procedure through a national agency is the logical one for Great Britain for two outstanding reasons. Relative to the United States the area is small and the population is dense (700 to the square mile) and relatively uniformly distributed as compared to the disparity between Rhode Island with about 700 to the square mile and Idaho with about 50 to the square mile. There are no subdivisions of sovereign governing units such as our states, with each having the right of eminent domain and hence the right to enact such legislation as is suggested in the report, or to delegate the rights to the communities within the states.

[66] Expert Committee on Compensation and Betterment—Final Report. Presented to Parliament by the Ministry of Works and Planning, London, His Majesty's Stationery Office, 1942, p. 31.

Even within many of the states, such as New York, there is great disparity in the spread of population and in the intensity of land use, as between the areas in and about New York City and the extensive rural areas, including the Adirondack and Catskill Mountains. This suggests that the urban control which we are discussing might well be limited to the regions in proximity to urban communities.

Legislation by an individual state will not always solve the problem. The fact that the influence of a metropolitan area often extends into several states indicates the need for some form of inter-state cooperation. Judging from the past, the best promise would seem to lie in the establishment of regional planning organizations, with official representation from the several states involved. While the achievement of such cooperation presents its difficulties, we have successful examples, notably the Port Authority of New York for the states of New York and New Jersey, and the cooperation with the District of Columbia by the adjoining states of Maryland and Virginia. There can be no doubt, however, that a national planning organization could do much in the way of studying the basic problem, suggesting types of legislation, and encouraging the formation of regional planning bodies in the urban areas.

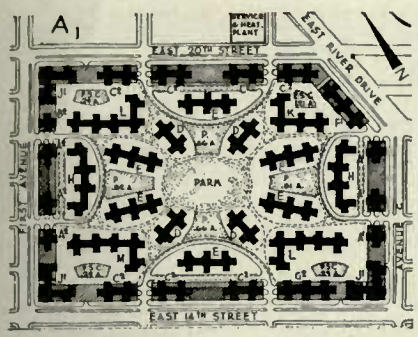
## Resumé

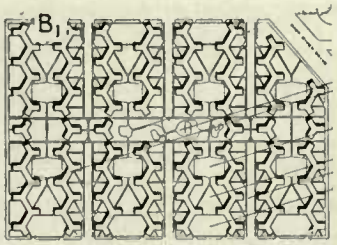
In all of this discussion we see certain high points standing out in clear relief: (a) The prevalence of blighted urban areas and the magnitude of their total effect on the social and economic well-being of the nation seems to warrant governmental participation—local, state and federal—which would require special agencies for handling real property—in the case of the Federal Government possibly only with advisory powers. (b) If government must participate, it must also establish safeguards against the recurrence of blight. (c) These safeguards may be had through the municipal planning agency, in determining the areas in need of rehabilitation and through the municipal agency which is to review the merits of each project, and also through the federal agency which may make federal loans. (d) In the rehabilitation of blighted areas, a general write-down in assessed values of the land will usually be necessary. The revaluation should be based on returns from the property when put to its most efficient use, and the purchase value be appraised on an uniform basis, which probably would exclude prior income based on inefficient use, or use contrary to the public good, such as over-crowding. (e) Private interests should share with the municipal and Federal Governments in the write-down of the values; and local financial institutions, particularly those having an equity in properties in the area, might well, in self-interest, advance loans at exceptionally low interest rates (if secured by bonds, then at rates comparable to the rates of Housing Authority bonds). (f) From the point of view of urban rehabilitation and orderly growth, there should be a restudy of the activities of

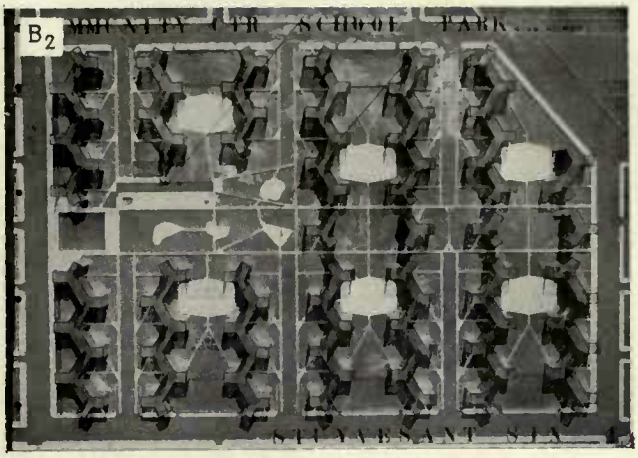
local housing authorities to determine whether or not the authority might to advantage be made responsible for the total housing situation.

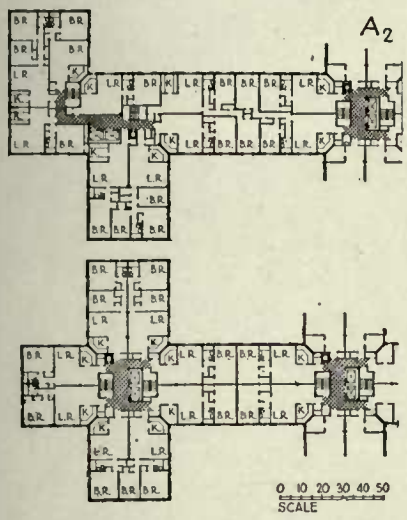
The legislation passed and that proposed is recognition of the importance of reclaiming the obsolete areas of our cities and checking further obsolescence and is recognition of the need of public participation. As yet state legislation has not effected any actual rehabilitation; much less has it effected checks against general city obsolescence, nor does it seem likely to do so. To tackle the problems on a city-wide scale, federal participation of some sort seems to be necessary. Remaining to be worked out are important details, still in debate, but not insurmountable. It is encouraging, even thrilling, that influential nation-wide private organizations and at least one federal organization have been able to see eye to eye on so many major issues. We close with the words of the Chamber of Commerce of the United States: "Cities either progress or retrograde. The well-being of many people and much property is at stake. It is therefore, important and timely that each city review its past, restudy its present and endeavor actively to guide its future growth. This is a business problem of the first magnitude which can no longer be left to casual ineffective methods of action."[67]

[67] "Balanced Rebuilding of Cities," Washington, April, 1937



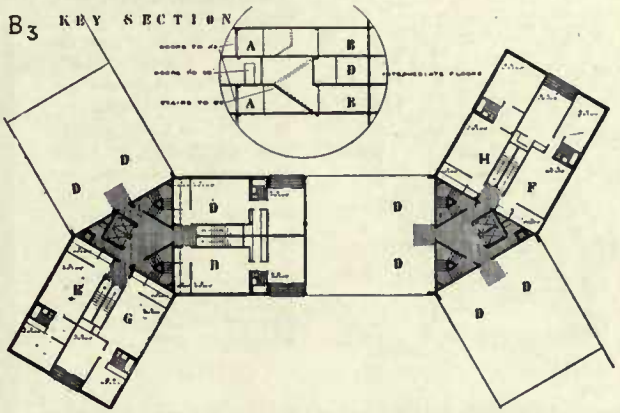



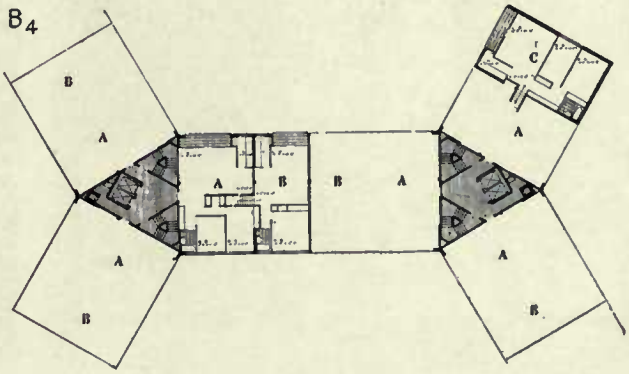




A. Stuyvesant Village as originally planned, to house 9,000 families in 14-story buildings, replacing 18 city blocks.

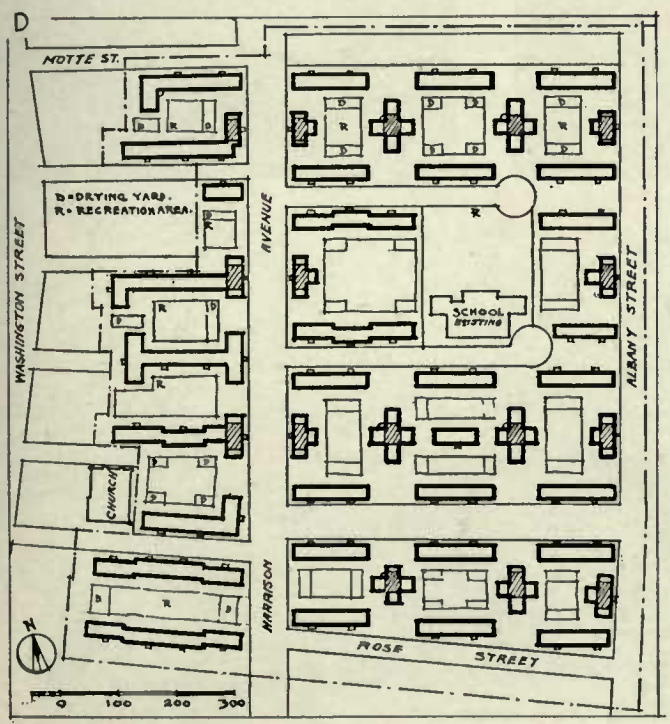
B. Studies for the Stuyvesant site by Marcel Breuer, providing for better light, insolation, exposure to breeze and outlook. 92% of the apartments receive winter sunshine, 66% have through draft, all have balconies, except the 2-room suites, which have corner locations. See $B_3$ and $B_4$. $B_1$. With 15 stories provides for 1% less population than A, has 94% the coverage, more recreational areas, better distributed. Mr. Breuer estimates the required rent to be 2.9% higher than in A (as from $42.00 to $43.20). $B_2$. Reserved space for a school and community center; rent 7% higher (as from $42.00 to $44.94). $B_3$, $B_4$. Elevator serves every third floor, stairs the intermediate floors.

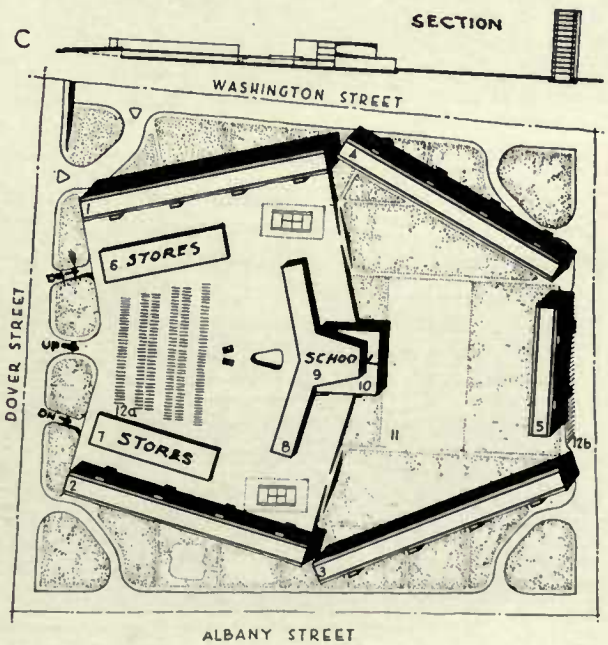



C. Mr. Breuer's study for 12-story apartments on the Boston site shown on Plate 38, E, clearing the entire area. Four of the five buildings are oriented for morning and afternoon winter sunshine; all apartments have balconies on the sunny side; they are served by "access galleries". *See Plates XIX, XX, XXII.* School, community center, stores.

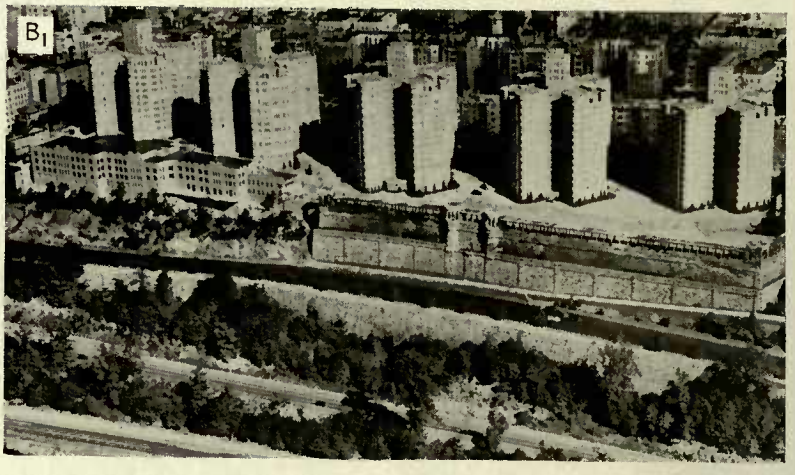
D. Study by this author for the same Boston area, based on the principles on insolation, etc., stated in Chapter on Site-Design, using the street pattern of $E_2$, Plate XXXVIII has about same number of apartments, but each with balcony. All three schemes have about the same density.



# PLATE XL. LARGE SCALE HOUSING, PRIVATELY FINANCED





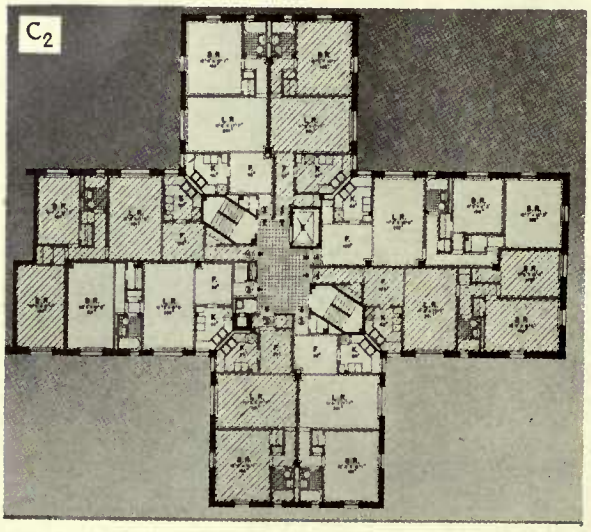

A. 1933. Knickerbocker Village, New York. Limited dividend, RFC loan. Coverage 46%, density 765. Arch't. F. F. French.

B. 1939. Castle Village, New York. $B_1$. Restaurant in low buildings at left. Coverage 20%. Arch't. G. F. Pelham.

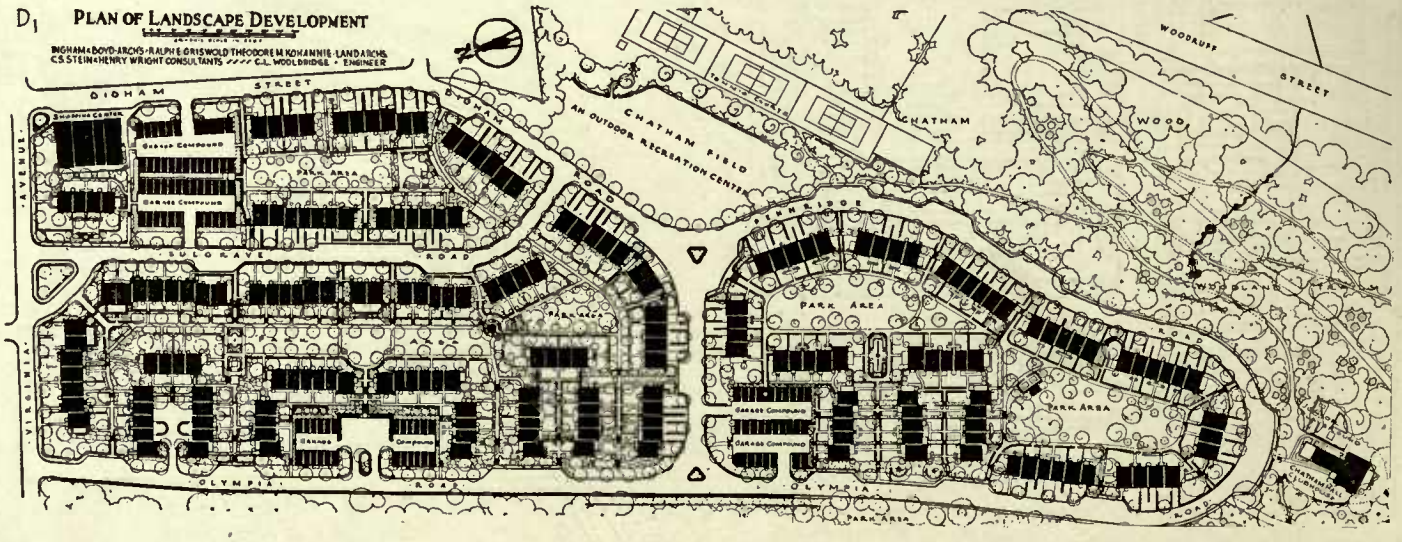
C. 1939. Parkchester, New York. Coverage 27.4%, density 310, $C_2$1. No separate dining rooms in any type. Arch'ts. R. H. Shreve and chairman of Committee on Design.

D. 1931. Chatham Village, Pittsburgh. Limited dividend on hillside site. Coverage 18.4%, density 45.4—disregarding woodland greenbelt of 25 acres. $2\frac{1}{2}$ story row houses. Arch'ts. Ingham & Boyd. Site planners, C. Stein and H. Wright.







## SECTION III. THE COST OF HOUSING AND RENT: THE DETERMINING FACTORS

### All the Factors

Our interest is in low-cost housing of all types, public and private, for rent and for home ownership. The following discussion has to do with broad principles rather than details.

There are several main groups of factors which determine the costs of housing. *First*, there are the standards of living, which determine the size, finish, and equipment, and to some extent the type of construction. *Second*, the site of the housing project, for "under all lies the land." Whether the site is central or outlying determines the density of the housing and hence the type of building—whether apartments or row houses and whether or not of fireproof construction. A *third* group of factors determining the cost of production appears on the opening of the contractor's bids, and these are largely pre-determined by the standards adopted (including building codes) and by the site, but are also determined by the skill of the architect and the judgment of the bidding contractors, as well as the prevailing cost of material and labor. A *fourth* group of factors appears in the financial arrangements—the interest rate on the money to be borrowed and the length of the period of amortization. The length of the period of amortization in turn affects to some extent the degree of permanence of the construction, which is another price factor. Taxes also fall in this group of financial factors. A *fifth* factor is the size of the project. This affects both the initial cost and the later operation and maintenance. A *sixth* factor, in the case of rental housing is management, which affects the cost of operation and maintenance.

Those who largely determine these groups of factors, except that of the standards of living, make up what is loosely known as the building industry. But government at various levels also helps to determine building costs, through regulations, building codes and labor laws.

After the upheaval of World War II it seems probable that there will be drastic changes affecting the production of buildings. *First*, a far-reaching occupational reorganization will probably be necessary, for there will be a shortage of traditional craftsmen, due to the fact that the building industry has been disorganized by the diversion of personnel into other occupations, military and industrial, and younger men are not being trained in these traditional crafts. Specifically there will inevitably be an acceleration in the use of prefabricated materials and parts, and this will have its effect on manufacture and distribution, but mostly on labor, shifting much of it from the building to the factory. *Second*, there is assurance of new materials made possible by the revolutionary readjustments of industry to meet the war needs. *Third*, new materials, new techniques and a probable desire for directness and simplicity will have an effect on design. *Fourth*, there are signs, possibly visible only to the optimist, that the war has brought about advances in coöperation between management and labor, and in the policy of organized labor a wider recognition of the interest of the general public, and the effect of these policies on the general economy. *Fifth*, the continuing spread of urban blight, of decentralization and the deflation of urban land values all have led to a widespread recognition of the need of a review of the position of land in the urban economy, particularly as one of the principal media for raising taxes. Because of all of these possible changes we will review in some detail the base from which the changes would be made.

### Standards of Living

Standards of living, as regards low-cost housing projects, are based on certain minima of hygienic needs. These are not the bare minima of sanitary necessities. They are the minima for wholesome living, determined in large part by scientific methods. In the account of English housing, we pointed out that the government authority for housing was the Ministry of Health and that these national public health officials determined the British standards. These, having evolved throughout several decades, have influenced in varying degree the standards in other countries. Later a special subcommittee of the Health Committee of the League of Nations, a committee of technicians, including membership from European and other countries under the chairmanship of Dr. C.-E. A. Winslow, head of the Department of Public Health of Yale University, made a study, along strictly scientific lines, of all the underlying principles and requirements of hygienic housing.

In the United States in turn, the American Public Health Association organized a Committee on Hygienic Housing, with Dr. Winslow again as chairman, which has continued the scientific research of the international committee. Associated with the committee are specialists in many phases of housing. Their first report, "Basic Principles of Healthful Housing," is a comprehensive statement of the scientific data on which all standards for hygienic housing may well be based. Hygiene is broadly conceived to include mental health and composure and hence all the amenities of environment. But the interpretation of these standards into terms of buildings involves the judgment of the experienced architect, so that the determination of housing standards, while based on scientific findings, like the practice of medicine is in the last analysis an art, and not an exact science. The Committee of the Public Health Association called in architects and administrators of housing projects to help determine the means of attainment of the scientific principles and the report of the committee was made under two headings: "Basic Principles," and "Means of Attainment."

Because of the element of personal judgment in determining precisely what are the means of achieving the scientific hygienic principles applied to the actual

design of housing projects, the National Association of Housing Officials issued "Housing Standards," which is their interpretation of standards resulting from the "Principles" of the APHA.[1] The housing standards there suggested differ from those in "Means of Attainment" only in being less specific, in allowing to a greater extent for the development of new building materials and methods and for freer play of ingenuity and invention on the part of the designer. If we in the United States are to make our due contribution to housing, nothing should be done to hamper the creative ability of the architect, for architecture which is not growing and creative cannot fulfill its function, and is in fact dead.

The basic principles and housing standards determine the limits within which creative design must operate. These are, or should be, a basic part of every housing program. These and their interpretation in walls, roofs, floors, finish, equipment, and in the use of the land, are *the* prime factors in determining the cost of low-cost housing. This will become more apparent in our discussion of design. In reviewing housing in foreign countries (p. 55) we pointed out that although there is some variation in hygienic standards adopted, particularly as to the amount of space per person, nevertheless the great variety which appears from country to country is largely due to interpretation of these hygenic standards into architectural terms.

Decent housing is fundamental to that clean, loyal citizenship, which in turn is essential if the nation is to survive. Bad housing creates urban "deficit areas," the indefinite spread of which our cities cannot survive. If we are going to develop a comprehensive national housing program, which will insure a supply of good housing for all citizens and wipe out the burdensome deficit areas, if we are going to do this and carry on our housing program simultaneously with our reconversion program and the full development of our natural resources, then it seems inevitable that from the standards of living of the future occupants there shall also be purged the last vestiges of the influence of Hollywood glamor and of the beauty parlor, which some feel had perniciously invaded even the group on relief. If not through conviction, then through necessity, we shall surely find ourselves adopting the simpler, sturdier standards of life of the early pioneers, possibly even those of the Spartans. We cannot afford to shackle the great social and economic advance which good housing offers by even the suggestion of compromise with pampering. It is paramount that, the cataclysm of war having passed, the sun shall shine on a land where all shall have the *opportunity* for a wholesome home environment, but this opportunity must be for those who whole-heartedly make a maximum effort.[1a]

[1] For address see Bibliography, Appendix B, p. 245.

[1a] For a study of more of the details of the housing, see "A Million Houses a Year", Dorothy Roseman, Harcourt, Brace & Co., New York, 1945.

## The Building Industry and Housing Costs

### *The Entire Group*

Precisely speaking there is no such thing as a "Building Industry." If there were, its functions would be to study the building market, determine its demands and supply them. What is loosely called the "Building Industry" is that large and indeterminate group of industries and occupations which contribute to the production of buildings. There are only the rudiments of organization relating all these groups, and within each group also the organization is for the most part very loose. The field may be considered to be made up as shown in Table XVIII.

While within each group some competition prevails, there is none the less some coöperation. This comes through professional and trade organizations, such as the national and local real estate associations

Table XVIII. Groups in the Building Industry

A. Promoter-Owners:
- Financing;
- Acquisition of land; Promotion of building;
- Management.

B. Architects:
- Designing;
- Co-ordinating.

C. Contractors:
- General contracting;
- Sub-contracting.

D. Material Men:
- Manufacturing;
- Distributing.

E. Labor:
- Producing and transporting materials;
- Assembling materials at the building.

and boards, national and local associations of lumbermen, manufacturers of cement, institutes of architects and engineers, labor unions, etc. The avowed aim of these organizations is to raise the standards of efficiency and substitute ethical conduct for cutthroat methods, whenever they may exist. Aside from the avowed aim, Mr. Thurman Arnold of the Department of Justice averred that among some of these organizations there are also agreements in restraint of trade, (of which more later) which is not news to anyone within the industry.

Not all individuals of the various groups are within the organizations, but relations within and among the groups have for the most part improved and continued to improve with the extension of the various organizations. The fact that some of the groups are not exclusively occupied with building (manufacturers of steel, for example) is another hindrance to organization of the building interests. On the other hand there is a certain amount of inter-group coöperation, as between the American Institute of Architects and a group of

manufacturers of building materials and other groups working through the Producers' Council to bring about more efficient and reasonable standards of building materials and construction; also among architects, engineers, contractors and material men in a nation-wide movement to improve such standards by means of better local building codes—all of these interests work through and with the United States Bureau of Standards. There is also the Urban Land Institute, recently formed by the many groups interested in urban rehabilitation, and including realtors, financiers, city planners, housers, municipal authorities, and federal authorities.

In former generations there was one general contractor who had his own lumber yard, small sawmill and planing mill, general warehouse, and a book of stock plans, and that is the case today in many of the smaller communities. To him went the prospective home owner or business man for his complete building operation, provided that owner did not have to go to the bank for money. The results can be seen in any town on Main Street or Side Street. With centralized large scale production of building materials and the specialization of occupations, all this has changed. To study the building industry today we must consider each of several groups separately.

*The Promoter-Owner Group, Investors vs. Speculators.*

The promoter-owner group we may consider as *investors* and *speculators*. By investors we here mean those who build for their own use, whether they be government (Federal, state or municipal), corporations (requiring industrial, commercial and residential buildings), individual owners (mostly private homes) and a small group who build for the income return. By speculators we mean those who build primarily in the hope of sale with a capital gain. It is not always obvious in which category all financing groups may belong. The financing agencies (banks, mortgage houses, insurance companies) may also be investors. The federal and state agencies aiding subsidized housing are essentially financing agents. Local housing authorities are owner-investors, bringing an indirect financial return to their city through savings in other municipal departments and through a direct social return.

Up to the present, in the United States the chief incentive in new building enterprises, as in many other enterprises, has been the hope of a capital gain, involving some element of speculation. Typical speculative building calls for a quick sale and a quick turnover of the capital into a new venture. Investment for income on the other hand is concerned primarily with safety for the capital investment and a dependable annual return. This latter type of investment has not been prevalent in this country, though the recent large operations of the Metropolitan Life Insurance Company and of some others, referred to earlier in the book, may harbinger a new trend.

The element of chance enters into speculation more than into investment largely because speculative buildings must be sold on the market as it exists when the buildings are completed. The wise speculator includes in his estimates of cost an item to cover unforeseen contingencies; if such contingencies do not arise this item is added to his profit, or enables him to sell at a price lower than anticipated, if competition requires; if the contingencies do materialize they are a legitimate part of the cost. In the last analysis the sales price is determined by the market, by competition, and this may either force the speculator to take a loss or allow him a small or a handsome profit. When a building built *for speculation* is bought for investment, the rent charged must of course be based on the speculative price, which includes a profit. Such buildings are, generally speaking, built with more consideration for low first cost than for economical maintenance. In a building built *for investment*, while the element of chance exists in the competition for rents, the item for profit on capital turnover does not exist, and the relatively small element of chance of the first cost running above the estimate can usually be taken up by an adjustment of rent.

The mortgage insurance offered to home owners and to mortgage lending organizations by FHA and by FLBS to home owners through the Federal Savings and Loan Associations has so reduced the risk of capital loss that money for privately owned houses and for rented homes (particularly in apartments) can now be had on relatively easy terms. It should be borne in mind that these risks are reduced, not only through spreading the loss among many investors throughout the country, but also by assuring greater permanency of investment through raising the standards of the design and construction of the buildings and of the entire neighborhood. The same principle applies to the subsidized housing aided by USHA. As we have pointed out on p. 134, the major field for which aid is not provided by any federal agency is that "No-man's-land" of housing, lying between the field of FHA and USHA, the solution for which would seem to be a broadening of the base of USHA financing, as previously suggested, and co-operative housing financed by loans at rates comparable to those of USHA.

*Mutual Ownership, Coöperative, and Limited Dividend Housing Investments.*

In this country coöperative apartment houses for those in comfortable circumstances are not rare and seem to have a good record provided the original financing and the cost of subsequent operation have not been padded. In order that coöperative or mutual ownership housing may become available for families of low income, the investments must be protected by that wide spread of the risk and by those definite standards for buildings and neighborhoods which are fundamental to the success of FHA and USHA. We have recounted how such protection was accomplished in Holland, Denmark and Sweden, either by nation-wide coöperatives or with federal backing, or both. The only steps

in the direction of such governmental aid which have been made in America are the New York State Housing Act, the PWA loan to the American Federation of Hosiery Workers, for the Carl Mackley Houses in Philadelphia and the short experiment of mutual ownership for defense housing by FWA.

First was the New York Act of 1926, which encouraged limited dividend housing in cities, offering other inducements, to grant partial tax exemptions for 20 years. Despite the fact that cities failed to allow the tax exemptions, under the Act there were constructed, between 1926 and 1934, 14 projects housing 5,907 families who could pay from about $9.00 to $12.50 a month per room. Of these, two were coöperative projects undertaken by the Amalgamated Clothing Workers: Amalgamated Dwellings, Inc., on Grand Avenue for 231 families and Amalgamated Housing Corporation, facing Van Cortlandt Park, for 629 families (see p. 14). The act of 1939[2] provided, however, among other things, for the organization of housing companies which will charge certain specified limited rents, pay limited dividends and are limited to certain income groups; the companies may receive from the state 50-year loans for the full cost of the project, at the going rate of interest to the state (3½ per cent in January 1940) and may receive certain subsidies from both state and city, as well as loans from the city. The public loans are protected by the same type of standards of design, maintenance and administration as are required by FHA and USHA. Loans may be made either through local housing authorities or through the municipal government. A little later came the Dunbar Apartments for Harlem negroes, financed by John D. Rockefeller in the late 1920's, which house 510 families in a project complete with day nursery, kindergarten, gymnasium, playgrounds, their own stores and even their own employment bureau.

In commenting on this part of the Act, Mr. Weinfeld, then State Superintendent of Housing said, "The limited dividend projects constructed under the former State Housing Law have made an important contribution, not only in providing adequate housing at low rents, but also in establishing the financial soundness of the undertakings. The detailed financial experience of these companies is shown in the tables appended to the report, but it may be pointed out here that the non-coöperative projects show an average annual earning of 7.566 per cent throughout their existence. The demand and need for housing accommodations of this type are demonstrated by the remarkably low vacancy loss which characterized their operation. For all projects, the average loss in rents due to vacant dwellings was 0.88 per cent in the year ending August 31, 1939."[3]

A coöperative is but a special form of the limited dividend company in which the dividend is zero (since any profit is returned to reduce the rent), so the experience of the limited dividend companies is pertinent to this discussion. The City and Suburban Homes Company of New York City began in 1896 to pioneer in building model low-rent apartments as an investment with modest dividends. In a report issued in 1938, after twenty years of operation,[4] they had made 15 ventures into low-cost housing of several kinds, including 11 apartment houses for 4,300 families, and three suburban projects for more than 300 families in single family and row houses. By 1938 their initial capital had expanded from $487,200 to $4,255,690, had created a surplus of $1,232,000, and had paid dividends to stockholders averaging 4.2 per cent. After getting well under way in 1900, up to 1916 dividends averaged about 4 per cent, from that time on they have averaged about 6 per cent, varying from a high of 8½ per cent in the mid-twenties to 3¾ per cent in the depths of the recent depression. They started with model buildings and have maintained such high standards of service as, strangely enough, to lead to the criticism of paternalism. These standards are such as would be observed in a coöperative project. An average room rents for $9.70 per month in the project bringing highest rents, and $7.92 in the project bringing lowest rents (as of 1937, the last year itemized in the 1938 report), both projects being in their 21st year of use. In 1907 the average rents in these same projects were $5.50 to $4.56, indicating that in these well-designed buildings 20 years has not produced any effective obsolescence; likewise in another project in use for 36 years the original rent in 1902 was $4.35, in 1938 $9.65. These advancing scales follow in their general trend those of the city as a whole and they hold true for all six projects built from 1902 to 1912. In comparing these returns with those of the 14 projects cited under the New York State Law, it should be noted that the City and Suburban Homes Co. borrowed its money through ordinary commercial sources, whereas a number of the others had the aid of PWA financing or that of labor or both.

Chatham Village, in Pittsburgh, is another interesting project of a limited dividend company, with objectives similar to those of City and Suburban Homes, which created a self-contained neighborhood or village, handsome in its simplicity and restraint, showing rare skill in the development of a site on rough ground toward the edge of the city. Units of five, six and seven rooms, at about $10 a room, net an income of 5 per cent. It has supplied a demand and a need for good housing for a certain white-collar group. Other projects with similar objectives are the Julius Rosenwald housing in Chicago, the Model Homes Corporation in Cincinnati, and the Washington Sanitary Housing Company and the Washington Sanitary Improvement Company of Washington, D. C.

[2] New York State Public Housing Law and Companion Acts. Chapter 808, see especially pp. 170–193.

[3] Legislative Doc. (1940) #70, "Report of Sup't of Housing to the Governor and Legislature of N. Y." Edward Weinfeld, p. 17.

[4] The data in this paragraph are from "Four Decades of Housing with a Limited Dividend Co.," Federal Housing Administration, Div. Economics and Statistics. Gov't. Printing Office, Washington, April, 1939.

The need for coöperative housing seems to be clearly indicated. The New York State Law has shown the way for other states. Latest is the mutual ownership program inaugurated by the defense division of the Federal Works Program. Abundant demonstrations are found in northern European countries, which we have outlined earlier in the book. Information on the technique for coöperatives was supplied in 1934, when the Department of Labor issued "Organization and Management of Coöperative Housing Associations (with Model By-laws)."[5] Reporting to the President in 1937, a special committee of inquiry into coöperative enterprise in Europe included an appendix on "Co-operative Housing in Europe" (pp. 243, 253).[5] What remains to be done is first to establish a national organization for encouraging the formation of and consolidating the efforts of mutual societies, next to enact state legislation providing for their operation, and then to make governmental funds available at rock bottom rates to the large and important group just below the reach of FHA and definitely above the reach of USHA.

In the field of coöperative or mutual housing, as well as in private investment housing, there is possible a considerable reduction in rent, or its equivalent in monthly payment toward home-ownership, through the extension of the period of the loan and through the reduction of the interest rate. Thus the cost of amortization over a 54-year period would be about half that of a 27-year period, resulting in a reduction in the rent of about 12 per cent. If for large-scale projects interest rates were cut from $4\frac{1}{2}$ per cent to 2 per cent (which is well above the current rate for housing authority bonds) by the two methods combined there would be a saving of about 8 per cent in the rent. (See also Table XVI, p. 134.) Reductions of this magnitude might be made available to mutual ownership housing, because of the distribution of the risk among a large number of individuals. But even lesser reductions in rates would still make possible considerable reduction in rents. Thus a forty year loan at $3\frac{1}{2}$ per cent would result in about a 12 per cent smaller rental than a 27 year loan at $4\frac{1}{2}$ per cent.

*The Economy of Large Scale Operations.*

The cost per square foot of large tracts of land even in interior locations is usually less than the cost of small tracts, both in interior and in outlying sites. Moreover, a large tract in a given neighborhood can be more economically planned and developed than a small one, in part by reducing the proportion of roads and utility lines. In addition, the large tract makes possible more adequate and attractive open spaces, which increases rentability and salability. Also, there are economies in the cost of maintenance and operation of large projects. The USHA reported thirty-three outlying tracts purchased at two cents a square foot, against ninety cents for interior tracts, that is, at a ratio of 1 to 45. The USHA figures for all projects up to September, 1941 showed that the cost of developed land averages a little over twenty-two per cent of the total cost.[6] The cost of the undeveloped land varied in USHA projects from 5 to 12 per cent of the total cost of the projects,[7] the variation roughly covering the range of prices from central sites to suburban sites. Adding the cost of extending the distributing utilities, the ratio of cost of outlying land to central land might become, roughly estimated, 1 to 4, showing a saving of three-fourths of the 22 per cent, or 16.5 per cent. However, such savings can be made only when there is cheap transportation. The effect of $16\frac{2}{3}$ cents and $33\frac{1}{3}$ cents a day for all family transportation in a peripheral and in a distant site respectively is shown in Table XIX.

TABLE XIX. HYPOTHETICAL COST OF HOUSING BY LOCATION OF SITE*

| Elements of Cost | Slum site, 1,600 square feet 4-room apartment | City-outskirts vacant site, 4,000 square feet 5-room house | Converted farm-land site—5,000 square feet 5-room house |
|---|---|---|---|
| 1. Cost of land ready to use, per family | $2,400 | $1,000 | $750 |
| 2. Cost of housing unit, excluding land | 5,000 | 4,800 | 5,000 |
| 3. Interest and amortization, 5 per cent on 1 plus 2, per month | 31 | 24 | 24 |
| 4. Full taxes, per month | 14 | 10 | 12 |
| 5. Project maintenance of buildings and grounds, and fire insurance, per month | 12 | 10 | 10 |
| 6. Water, electricity, and hot water, per month | 4 | 4 | 4 |
| 7. Heat, per month | 4 | 5 | 5 |
| 8. Transportation, per month | — | 5 | 10 |
| Total cost per month, *i.e.*, cost rent | 65 | 58 | 65 |

* From "Land, Material and Costs", *op. cit.*, p. 6, where in reference to items 1 to 5 there are footnotes which are interesting, but not essential to the present discussion.

As we have said, generally speaking, the larger the operation, the greater the opportunity for efficiency. This begins with the organization of the work, and carries on through the installation of contractor's equipment for both the handling and the fabrication of materials. It makes possible greater specialization of individual workers and of teams of workers, resulting in better workmanship in less time. In all it makes possible considerable savings in that big item of labor.

There is one price for purchases in train-load quantities, another for carload quantities. Large

[5] Washington, U. S. Government Printing Office.

[6] Computed from data on p. 4 of "Public Housing, 1934–41."

[7] Crane in "Location Factors in Housing Programs," being, Part I of "Land, Material and Labor Costs," a technical monograph on Housing prepared for the Industrial Committee of the National Resources Committee, U. S. Government Renting Office, Washington, 1939.

quantity buying also interests bidders in a wider range of territory—and this also applies to bidding for the general contract, all of which contributes to lower prices.

What all this amounts to we can only roughly estimate. USHA claimed that the cost of dwellings in public housing projects averaged 22 per cent less than "comparable" privately financed dwellings, as indicated by average costs reported by the United States Bureau of Labor Statistics.[8] Since a large proportion of private enterprise dwellings are produced on a small scale, the difference in cost might fairly be assumed to be largely due to the difference between small-scale and large-scale operations.

*Cost in Management.*

While the cost of management is not a major item of direct expense, it plays an important role in obsolescence and in other ways. This is true even in the management of isolated houses, but to a far greater extent in large-scale projects.

The type of management which looks only to immediate returns will skimp on repairs and maintenance. Resulting from this is a lack of pride and coöperation on the part of the tenant and the early depreciation and obsolescence of the property. On the other hand, a house kept in a good state of repair and up to date in its appointments may be good for several generations—as witness the Alfred T. White properties in Brooklyn (pp. 8–9) and the century-old company housing at Chicopee Falls (p. 6).

In a project large enough to warrant a manager's office on the site, there are direct economies and advantages other than postponing obsolescence. First of all, there is the economy which usually comes from a large central heating plant, and from a simplification of the collection of all types of refuse. Then, there is the very substantial economy that comes from the wholesale purchase of electricity, gas, and water. Special insurance rates may be had because of the open and orderly type of the development, the presence of a staff of workers, and of a population with esprit de corps and pride in the project. This esprit de corps and pride of project, which local management encourages, results also in the good upkeep of the entire project and of each family unit, and gives an opportunity to catch needed small repairs before they become big ones. Local management also tends to bring about prompt payment of rents and to lessen the number moving out and in. (*See also "Management and Design," p. 213.*)

[8] *USHA Release No. 422, November 29, 1939.* Since these permits are for buildings of heterogeneous types, the comparability is open to question, at least must be explained. The cost of buildings as registered with municipal building departments (from which the Bureau gets its data) is often appreciably below the actual complete costs. While the figures include some buildings of costly construction, the average type of construction might be no more, possibly less costly than those in USHA aided projects. These two factors may in some degree compensate each other, so that the private housing *may* be considered approximately comparable, but it is more a matter of conjecture than of actual data.

Operation and maintenance are direct charges against the rent, and in USHA projects included on the average 27 per cent of all charges. (*See Graph III, p. 129. Table XVI, p. 134.*)

*The Architect's Services:*
*The Normal Architectural Procedure.*

The architect by function is the coördinator for the entire production of the buildings which he is commissioned to design and superintend. First he acts as the promoter's agent in analyzing his requirements and finding a satisfactory solution of his building problem in all its aspects; then he prepares drawings and specifications which largely predetermine the kind and amounts of materials which will be needed, as well as the kinds and amounts of labor (both at the factory and on the job). He then brings the promoters and the contractors together under a contract based on the drawings and specifications, and finally acts as supervisor of construction to see that all parties to the contract live up to the terms of the contract. Much that is said about the architect applies in principle to those of other professions who may be coöperating with the architect, the site-planner, the landscape architect and the engineers.

For those employing architects it is important to keep in mind the steps of the entire operation. After the architect has produced a satisfactory design for the building, he prepares working drawings and specifications and other documents necessary to construction of the building. The contract between owner and contractor is customarily based on a bid submitted by a general contractor, the "best" of a number of bids submitted in competition. These bids are based on uniform information as to the requirements of the building, the information, prepared by the architect, being in the form of drawings and specifications as to material and workmanship.

This information, (drawings and specifications), is included in the contract documents which form the basis of the contract. After the contract has been let, these "contract documents" serve as the guide to the contractors in ordering materials and building them into the structure, hence as a guide to the superintendence of both the contractors and the architect. As the work progresses they are supplemented by further detail drawings and instructions from the architect, amplifying but not transcending the contract documents. The contractor in turn submits to the architect the "shop drawings," which are supplied to the contractor by the shops, which, for example, produce the structural steel, the doors and windows, the various parts of the mechanical equipment and of the finish—the object being to make sure that when these things arrive at the building there will be little question of their being in conformity with the contract documents. Contracts are sometimes based, not on a competitive bid, but on the cost of material and labor, often with

the object of saving the time consumed in competitive bidding. Even in this form of contract, the contract documents and subsequent drawings and specifications must be prepared in much the same way.

This scientific procedure of preparing progressively detailed drawings and instructions, while time consuming and costly, more than pays for itself, since it largely eliminates the element of chance as to interpretation of the "contract documents." Because the working drawings are first used for taking bids, the more complete and accurate these documents, the lower the bids; and the more complete these and the subsequent information, the more smoothly, expeditiously and economically will the work be executed. This procedure is an essential cost in building, but in the hands of experienced contractors and architects and a reasonable owner it should not be burdensome. An unreasonable attitude on the part of any of the three may, however, cause unnecessary delays and costs.

The services of the architect do play a very important rôle in the cost of buildings. This is not because of the fee paid him but because of the fact that it is his skill and experience which determines what goes into the building. To so design the building that each part, each space, is efficient and of adequate but not excessive size, that all parts are efficiently related, that all parts have adequate light and air, that the construction and all the complicated mechanical equipment are efficient, sound and durable yet without excess, and so that the maintenance cost will also be low—to achieve all this puts on the architect, not only the major burden of responsibility for the success of the building in its use, but also responsibility for its first cost and its operating cost. Obviously, prerequisite to the architect's success in carrying out any large building project is native ability, good basic training, long experience and financial responsibility and integrity.

The architect's fee may be a percentage of the cost of the work or may be a fixed sum plus expenses—the latter method requiring more detailed book keeping. In proportion to his responsibility and to his outlay in time and expense the architect's fees are far smaller than in most other comparable lines of work—the real estate agents get almost the same fee for negotiating the sale of a building. In common with the other branches of industry, particularly the contractors and material men, the architect must carry his office organization or at least its skeleton through seasonal slackness and the depressions of business cycles. Until ways are devised to bring about a steady flow of building to take out much of the seasonal and cyclical depressions in the "building industry" and so reduce the costs of doing business—until this is done there does not seem to be much chance for the responsible architect to lower his fees. However, a special schedule of fees for housing projects has been worked out by the American Institute of Architects in consultation with the USHA, the fee diminishing in proportion as there is a repetition of building units.

*Public Architectural Offices or Bureaus.*

Organizations which have more or less continuous programs of building have from time to time established their own architectural offices or bureaus. Municipal school boards have the longest experience in this method, beginning with the Boston School Board in the early 1890's. Some of these bureaus have achieved considerable success for a time, but many if not most of the old ones have gone and the later ones are relatively few in number. The proportion of an architect's fee which is profit may vary from nothing to about one-half the total fee and that is the only possible item which may reasonably be expected to be saved through a bureau. Thus on a basic fee of 6 per cent with a normal profit of 3 per cent, the saving if any would be a portion of 3 per cent. To offset this there is usually greater efficiency and a better conservation of time in an organization operating in competition with others than in one in which the competitive element is largely eliminated. It has commonly been found difficult to get at the precise cost of work performed in a public architectural bureau because many items of overhead which are properly chargeable (rent, light, telephone, stationery, blue prints, etc.) are usually absorbed in the accounts of the larger department of the government in which the bureau exists. The authority establishing a bureau, in attempting to save this fraction of 3 per cent (or less in most housing projects), takes the risk of losses through periods when building is inactive. To organize and equip an architectural bureau for a short period would be extravagant.

It is to be hoped that before long local housing authorities will develop long range programs, which will include or be tied in with plans for the rehabilitation of obsolescent residential areas. In planning for and in keeping such programs up to date, authorities might be justified in setting up a small architect's office for making the necessary studies, which would be in the nature of preliminary sketches, involving city planning problems as well as housing. It would involve essentially the services of one architect who is expert in these matters, with the assistance, when conditions might warrant, of one or possibly several draftsmen.

An interesting forum on the pros and cons of this subject was held at a recent convention of the American Institute of Architects. Mr. Walter R. McCornack, later Dean of the School of Architecture, M.I.T., who was in charge of the architectural office of the Cleveland School Board, and has had a wide practice as consultant to school boards, stated: "I am heartily in accord with the creation of bureaus in the state government which shall be program builders, in charge of maintenance and operation and investigation of facts. . . . My experience with the experimentation by a lot of government agencies is that you don't always get the facts [as to costs]. . . . I have operated a bureau where we have had a minimum amount of public interference and the greatest amount of freedom, but if any man works in a bureau more than ten or twelve years his work shows it." Referring to his experience on a commission to investi-

gate the New York City school situation, he continued: "After having threatened to subpoena the records we finally got the costs of that bureau, which were somewhere between 8½ per cent to 9 per cent." But Mr. McCornack pointed out that it is not cost but quality of service that should determine which system is best, and that in theory and sometimes in practice buildings produced under low fees are more costly than those produced under high fees.[9]

Mr. Wm. B. Ittner, Jr., of St. Louis, a consultant of wide experience in dealing with school boards through bureaus and otherwise, referring to a survey made by a committee of the AIA, stated: "Some bureaus have been well conceived and are well run and do have competent architectural supervisors as their heads. But in spite of this, their costs tend to become considerably higher, not only in plan production but also in the cost of the finished building. . . . If such a bureau were created, it should be carefully outlined and planned and should be based on a long range building program. This program should be carefully studied and well thought out, long before the need arises for actual construction."[10]

Prof. Howard Dwight Smith of Ohio State University made these comments: "I have come to think, through some 20 years of varied experience with it, that the bureau has possibilities as a reasonable means of rendering public service. I know the faults of the bureau, for I have worked with it." Prof. Smith based the possibilities of success on freedom from political or other bias in the original appointments and in carrying on the work. In this he founded his optimism in part on the hope that in the future it may be possible to draw on a group of "public career" architects and, referring to public housing, suggested the "need of a St. Francis of Assisi to lead the way to a happy solution of one of the nation's greatest problems." The public advantages which he lists for the bureaus are those which would be inherent in a bureau limited to programming and the necessary research implied. The disadvantages, in addition to those which we have previously cited, are "Repetition of unrecognized errors as a result of misjudgment, or of particular professional ideas of an incumbent. . . . Mistakes in professional judgment or even 'malpractice' may possibly become the sole legal responsibility of the authority."[11]

Mr. A. Gordon Lorimer, chief of the Bureau of Architecture of the New York Department of Public Works, in a recent article tells of the advantages which he finds in the bureau.[12] Most of these advantages could obtain and often do obtain in the private office. Continuity in the flow of work and the accumulation of experience in the special line of work handled by the bureau are advantages which he stresses and which do not come to most offices, but do come to many. Mr. Robert B. O'Connor, who has had considerable experience in public bureaus, differs with Mr. Lorimer in emphasis and in some of his conclusions.[13]

As the privately operated housing agency of World War I functioned more rapidly and efficiently than the centrally operated Federal agency (*see p. 12*) so also in World War II, housing designed in private offices and administered through local authorities was more efficient and was completed in less time (*see p. 39*).

*Coöperation with the Building Industry.*

Full coöperation of the architectural profession with the "building industry" is not yet possible, because organization within the profession of architecture is not yet complete. Forty of the states, the District of Columbia and five territorial areas have official boards for examining and registering architects, their purpose being, in the interest of the general public, to set standards of professional training and achievement, without which none may offer his services as an architect. In each state at the time of the enacting of the law authorizing the Examining Board, it was necessary to admit to practice all those who were making their living as architects, however limited their training and experience. So at the outset there was some compromise of the ultimate standards. However, as a result of this system of licensing and registration, the body of architects of recognized attainments is growing. Through a National Council of Architectural Registration Boards, reasonably uniform standards of professional training have been adopted by the various state boards, so that architects registered in one state may be recognized as qualified in other states. State associations of architects, made up of the registered architects of the state, are growing in number and now include 85 per cent of the architects of the country.[14] Each of these should be able to speak for the profession as a whole on matters pertaining to the profession and its work within its state. Between the registered architects in one state and those of other states, cooperation on a national scale is developed through the membership of the state associations in the American Institute of Architects.

It is under the initiative of the American Institute of Architects that the State Examining Boards have come to be so general and that state associations are being formed and that all are being affiliated in one organization. The Institute itself (dating back to 1857) is made up of over seventy local chapters, their areas varying in size with the density of population, from a metropolitan area to a sub-division of a state,

[9] Paper read before the AIA in Louisville, May 22, 1940, "Excerpts of Proceedings of Seventy-second convention of the Institute (AIA)." Louisville, May 22, 1940. Paper #11, Appendix, p. 142 et seq.

[10] Ibid. Paper #13, Appendix.

[11] Ibid. Paper #13, Appendix.

[12] "The Bureau in Architecture"—A. Gordon Lorimer in *Journal of the Am. Inst. of Architects*, Washington, D. C., April 1944.

[13] "Design Bureaus and Public Policy." Robert B. O'Connor, in the *Journal of the Am. Inst. of Architects*, July, 1944.

[14] Report of the AIA Committee on State Organization, The Octagon, June 1940, p. 20.

a state, or to several states. For administrative purposes, the country is divided into eleven regions. Thus, when the movement for state associations and their affiliation with the Institute shall have been completed, the promise is that there will be an adequate organization to offer the coöperation of the entire profession in any steps looking toward a better organization of the vast and loosely knit "building industry."

*Cost in Design.*

In the chapters on design and site-design we comment on the probable future trends of design. Suffice it here to say that the general trend is toward simplification in plan, in construction and in finish. In outside walls there is a tendency toward large unbroken surfaces, made possible by grouping the openings, a tendency toward making the roof sufficiently flat to permit the roof joists to serve also as ceiling joists or the roof slab serve as ceiling slab; toward exposing the structural materials; toward reducing the extent of fixed partitions, and the number of doors, and toward built-in furniture, which economizes space. In heating, plumbing, refrigeration and lighting, there is great promise of future improvements in the efficiency, compactness, and cost of the units, which qualities make further economies possible by contributing to flexibility in design. Some of these trends will probably be felt more in the private buildings of the lighter type of construction than in heavier types of public housing, but some of the trends have already affected public housing, as is evident in glancing at Plates I, VIII, IX–XIII, XLIV, and XLV. All this is apart from the contribution to reduced costs by prefabrication (*see Plate XLI, p. 195*), and apart from the introduction of new structural materials. How soon these trends will make themselves generally felt depends upon how soon the general public accepts them. Already they exist. But the term "prefabricated house" will become one of derision if prefabricators fail to work through thoroughly competent architects in siting the house, connecting the utilities, and establishing the entourage, and the entire neighborhood.

*The Contractors.*

Buildings for investment are customarily built under a contract between the investor, technically known as the "owner", and a building organization, technically known as the "contractor". These contractors are a highly diversified group, so much so that organization among them is very loose.

With the possible exception of very large cities, contractors get their start in some particular branch of building, more often than not as carpenters or masons. On the small structures, for which the carpenter first contracts, he can do the greater part of the work with his own crew of carpenters and will employ masons, plumbers and electricians to take "sub contracts" for the work in their lines, or possibly he may employ his own journeymen in some or all of those other trades. In the same way the mason contractor makes his start. In time the small contractor may develop an organization with bookkeepers, estimators, engineers, time-keepers, etc., with quantities of equipment and often his own yards and warehouse of stock materials, but a very large part of the work will actually be done by "subcontractors." His principal rôle has become that of an investor and manager, even a construction broker. When his organization has thus grown he must maintain it intact, or at least in skeleton form, and this requires a reasonably steady volume of business. To get volume he must often go beyond his own city, and for a large project in a distant city he must set up a special local organization. Thus single firms have grown until their activities extend from the Atlantic to the Pacific, into the island territories and foreign countries—great financial organizations with scattered stockholders and a directorate which may interlock with manufacturers and distributors of materials. From the smallest to the largest contractors there is a diversity not only in size and in complexity, but in outlook and in interests. There is little in common between Cy Smith of Stringtown and the president of Atlantic and Pacific Buildings, Inc. All these are the general contractors. This diversity is one of the hurdles in the path of close coöperation.

The "subcontractors" specialize, from excavators to electricians, but the size of their organizations may grow to proportions similar to those of the general contractors, and their activities extend from wiring of your cottage to converting the latent energy of the Grand Coulee Dam into electrical power for many states, or from excavating your cellar to building the caisson foundations for the Empire State Building. Some subcontractors act as sales agents for material men, which also complicates their rôle in the building industry. This has been notably true in many of the old line plumbing and heating firms, which oftentimes have been subsidized, each by a particular manufacturer.[15]

The competitive bids which the general contractor submit to the owner are based largely on the competitive bids of the subcontractors for the various branches of the work. Each subcontract, either by a tacit or an expressed understanding, is supposed to be let to the subcontractor whose bid the general contractor has used in preparing his own final bid. Failure to do this, to "peddle the bids" instead, puts a needless element of chance and therefore of cost on the subcontractor. Much of the effort to bring about agreements as to ethical standards among contractors has hinged on the persistent unfair practice of "peddling bids." This is of interest to the houser because preparation of reliable bids is costly and must be charged

[15] Data on the number, size, and distribution of contractors and subcontractors in the United States are found in "American Housing, Problems and Prospects," Factual Findings by Miles L. Colean; the Twentieth Century Fund, New York, 1944; Appendix C.

into the contractor's overhead expense, hence into the cost of the building.

To eliminate the element of chance in estimating, to avoid the multiplication of the process in "taking off the quantities" of materials and the estimating work involved in each separate bidder's office, the owner sometimes employs "quantity surveyors," who furnish to all bidders identical certified lists of the quantities of materials required. The position of the quantity surveyor is much like that of a public accountant. In England, whence the system came, it has long been generally accepted. In this country the idea is taking hold but slowly, probably due in part to the fact that our building methods and procedures are less stabilized than there and each contractor may have his own idea of how best to cut his material, and how much waste to allow. What he orders and charges to the cost of the building is the sum not only of what goes into the building but also of what is wasted.

The contract price of a building is the contractor's estimate of its probable cost plus his profit. The largest element of his cost is labor, and that is the most hazardous to estimate. Any given detail of the work will cost one thing if done by journeyman Smith, and another if done by Jones; whichever one does it, it will cost more or less according to the conditions of the weather and the condition of Smith's or Jones' digestion. The law of averages is the basis of the estimates of labor time, but the many variables make the estimating of labor cost uncertain at best. The actual cost for labor *may* not exceed the estimate, but there is no guarantee that such will be the case; for the required hours of labor may be under-estimated or labor may raise its wage scale, except for the *promise* that on USHA-aided housing unions will not permit a change in the wage scale after the contract is let. If that equitable system of not changing the rate of wages could be applied generally, the element of chance would be greatly reduced, thus reducing the cost of much private low-cost housing and of all classes of building.

Affecting the cost of labor on the building are two other factors: the resourcefulness of the contractor in adopting efficiency methods in the execution of handwork and the substitution of machine processes for handwork. Even on small frame houses the use of a portable electric saw, planer, etc., saves much time and labor. On large work the development of high-speed electric hoists has revolutionized the handling of materials, delivering on the highest scaffold brick in "packages" prepared at the brickyard. Can you remember the hod-carrier, climbing up the ladder to the fourth story with his hod of brick on his shoulder? All the walls of our older city buildings were carried on those shoulders. Revolutionary changes from such primitive methods must inevitably bring about technological readjustments—new jobs must be found for the hod-carriers. The effect of large-scale operations will be taken up a little later.

Two new types of building organization have come into being in connection with large scale housing. In the urban area is the organization made possible by an undertaking of the size of Parkchester, in which one organization, created by the investor, had control of programming, designing, and contracting. Roughly it is operated as follows: the design is allocated to a committee on design which includes the architects, the building organization chooses its subcontractors on their reputation rather than on competitive bidding, pays for them on a cost-plus-fixed-fee basis, and purchases or controls the purchasing of all materials, so as to get full benefit of quantity buying. Precedent for this was found in the building of Rockefeller Center. The other type of organization grew up in the projects insured by FHA. One organization purchased and developed the land, purchased all the materials, set up a local mill for mass cutting of lumber, built the buildings, and sold them. These operations often were financed by some local material dealer. It is common practice for contractors to do much of their financing on their credit.

This brief outline of the contractors' function in the production of buildings has, we hope, made it clear that the contractor is not operating a stationary engine but an automobile on a national highway crowded with other traffic, from trucks to motorcycles, traveling at different speeds and in different directions, among which he can hold to the prevailing speed or can speed-up by passing and cutting in. By doing the latter he may come into a head-on collision, perhaps with labor, or perhaps with local distributors of material (as when he purchases directly from the factory). Rules of the road are necessary, but modern conditions have made it clear that new rules for old roads are not enough, that for safety and for efficiency there must be a better organization of the movement of the traffic throng—super-highways and by-ways, as well as the local roads and streets. Similarly in the field of contracting if efficient organization of the industry is going to be brought about, it would seem that each major group must keep within its own field, that there must be some clean-cut break-down of the work done by each. Lower prices can come only with greater efficiency and less risk.

*The Material Men: Manufacturers and Distributors.*

"Material Men," as here used, means the producers and distributors of building materials. Some producers prefer to keep exclusively to production, utilizing existing distribution agencies; others have their own distribution organizations, which distribute directly to or close to the consumer. In either case the functions of producer and distributor are quite distinct. Distribution seems to be the manufacturer's greatest problem.

As with the contractors', so with the producers' organizations; they are of many sizes and varieties. There is the manufacturer who produces some one

specialty that he himself has invented, operating through a company of which he is owner and chief executive. There are those other producers who have plants scattered over this country and abroad, who mine their own raw materials, produce the whole range of materials which can be made from this raw material (magnesite, for example), and in addition produce other materials to meet competition or to enable them to offer a more complete line of building materials. In contrast to one single inventor, they maintain extensive research laboratories for developing new materials and for more economical processing of the old materials. Management may interlock with other organizations in the building industry and out of it, and such companies may have their own distribution organization.

The inventor-owner-manager organization is a tradition out of a long past; it is compact and can quickly make decisions and adjust itself to changes of general conditions or of a special program. While it may lack the advantage of large quantity purchase of raw materials, it does not, on the other hand, commonly have a large number of high salaried executives. One of the frequent elements of chance in such an organization is that all the eggs are carried in one basket; the basic patents may not be adequate to forestall rival products with a slight variation or even improvement of design; or some change in the supply of raw material or demand for the finished product may be fatal.

The increased quantity production made possible to the quantity producer through a large number of plants is coördinated by quick communication by telephone or radio, and by quick aeroplane transportation of officials from plant to plant. The variety of output and world markets reduces the element of chance arising from varying economic conditions in any one country. Because of the vigilance of the research laboratories in improving and extending basic patents there is also a reduction in the chance element; there is economy in having one sales organization handling the greater number of manufactured articles. These great producers are constantly contributing new and improved materials and are putting old materials in more convenient forms and packages—for example mineral-wool in "bats" to fit standard construction, in the place of the loose material to be laboriously and often less satisfactorily placed by hand. The big producers are often in a position to contribute all these advantages at lower costs.

There are those who see objections to these super-producers, claiming that the high salaries of a large number of officials too often prevent the realization of lower costs to the consumer. They argue that the production of the bulk of the building materials of certain kinds by one or a few manufacturers has made possible arbitrary price control by these manufacturers; some companies are actually being brought into court for so doing—for "restraint of trade." Another objection raised is that the plant in any given locality, being directed from a distant central office, is not always sufficiently sensitive to the general interests of the community in which the plant is located. It is also claimed that where a few companies dominate any given field there is a danger, if not an existing condition, of stifling that free competition which produces improved and new materials at the lowest prices.

In "American Housing" Walter F. Crowder is quoted to the effect that in a substantial majority of 283 important lines of building materials, the four largest manufacturers in each line controlled 50 per cent of the output.[16] From further data collected by Mr. Crowder, "We may conclude that the prices of building materials were well sustained from 1929 to 1937 in comparison with other commodities. Construction declined more rapidly than most industries, recovered more slowly, and even by 1940 was lagging behind other industries. All sources tell the same story. The relatively rigid price of building materials between 1929 and 1937 tended to retard recovery." Such prices are brought about by the fact that "Manufacturers of building materials maintain prices at sufficiently high levels to insure profit at comparatively low rates of production."[17] In consequence of which, "Labor sets its rate of wages at high levels upon the assumption that there is only a certain amount of work to be done."[18]

There can, however, be no question about the potential efficiency of large scale production. But the characteristic of a democratic form of government is security of a chosen way of living, even at a sacrifice of some efficiency. It would be ideal if every last super-producer would automatically adjust his methods to the framework of democracy, in which free and open competition is a traditional essential. But failing that, federal control seems to be inevitable—either that or a return to the smaller and less centralized organizations, or the inauguration of production controlled by the consumer, as in Sweden.

Distribution traditionally flows from the producers to local wholesalers, who maintain in their warehouses and yards a stock of a variety of building materials for the local market. Commonly these local wholesalers handle only the supplies for some one trade, with its subdivisions—thus a mason's supply house handles cement, lime, firebrick, flue lining, steel reinforcing for concrete, metal lath, etc.; besides lumber in its various forms, lumber yards commonly handle much of the carpenter's hardware both for structure and finish, asphalt shingles, and often paint and glass. A regional wholesaler often comes between the factories and the local wholesalers, handling a more

[16] In "The Concentration of Production in Manufacturies," Pt. V. "The Structure of Industry," TNEC Monograph No. 27, 1941, Appendix D, cited in "American Housing," *op. cit.*, p. 112.

[17] "American Housing," *op. cit.*, p. 112.

[18] "Toward More Housing," Peter A. Stone and R. Harold Benton, TNEC Monograph, No. 8, p. 134.

limited and specialized line of materials, cement and lime only, or only structural steel and iron. Some producers, such as some of the plumbing manufacturers, as we have said, have their own regional and even local distributing houses.

Transportation and the loading and unloading of any material, particularly heavy material, is costly. The warehousing and clerical work entailed in each transfer involve considerable expense. Local wholesale distributors offer the obvious advantage of an adequate supply of material from which local demand, if not too large, can be supplied immediately, and through the local warehouse arrangements can also be made for "direct from factory" delivery of large orders. So it is the smaller building operations which depend most upon the local wholesaler. There is, however, room for improvement; a large item is added to the cost of building because of the prevailing methods of distribution, with the many re-handlings from factory to building and the consequent accumulation of costs and profits.

The fact that contracting plumbers are commonly cogs in the manufacturers' system of distribution,[19] and the fact that plumbing is a highly unionized trade, has inevitably influenced the manufacturers to hold to the antiquated method of producing a multiplicity of parts which have to be assembled by hand at the building. Better methods have been devised, but as yet have been put in practice to but a very limited extent. From the consumer's point of view such trade agreements are no better than rackets.

On top of the normal expenses of distribution there are, in some localities, distribution rackets. These are nothing more or less than a modern form of brigandage, in which, by intimidation of various kinds, material dealers are required to pay tribute to the outlaws. If the victims of the racket had confidence in the willingness or ability of the police to give them protection the racket could not exist; in short, rackets arise out of laxness in law enforcement. Many rackets which followed the first world war, such as kidnaping, persisted until the federal arm reached out after them; so the building rackets apparently will persist until the federal government acts. When this happens there should be a considerable lowering of building costs in those communities where the rackets have existed, usually the larger metropolitan areas.

On the whole the actual manufacture of building materials seems to be on an economical basis, with chance for further economies in the direction of further standardization and the rationalizing of existing building codes—which often prevent the use of new materials, of which more a little later. In the field of distribution there is room for numerous economies, through the elimination of much re-handling and of arbitrary price control by means of trade agreements and rackets.

[19] "American Housing," *op. cit.*, p. 104.

*Standardization of Building Materials and Methods and of Building Codes; Origin of Present Standard Sizes.*

A better standardization of building materials and methods of construction offers considerable opportunity for new economies in the costs of buildings. The present standards of shapes and sizes of materials are largely the result of certain traditional methods of building. As we shall presently see more in detail, each new material has been made in sizes to fit in with existing materials. Thus an undesirable kind of standardization of building methods has been brought about in part by the standardization of materials but also in part by various types of building laws. To some extent a desirable kind of standardization has been brought about by mutual agreements among manufacturers, guided by a committee on manufacturers' standards working through the National Bureau of Standards, of which more a little later.

In a going production, any radical change in unit dimensions of materials would be difficult, but a consideration of the origin of some of these standard sizes may help to suggest the direction in which sizes of new materials might gradually move. The fact that most factories had to retool after World War II presented a long sought opportunity.

Many of the standard sizes and shapes of building materials on the market today are the result of the steam-powered sawmill introduced well over a century ago (prior to 1829), or possibly in some cases the result of the widespread use of the earlier water-power sawmill. In colonial days after a tree was felled it was hewn from the round with broad-ax or adze into roughly square timbers for the frame of the building; for floors, doors, sash, and interior finish boards were obtained from the logs by riving, sawing by hand over a pit, or by a water-power sawmill; for shingles and for lath, logs of the proper length were split or "rived" into thin slabs. Working the trunk of the tree down to the needed sizes by these means, except where a water-powered sawmill was nearby, was a laborious process, so natural sizes were adhered to as far as possible, without thought of the excess strength. By the time the steam sawmill came in there were many cities and large towns to which the lumber had to be hauled from a distance—another laborious process, to be reduced as much as possible. Thus it was that in the place of heavy hewn timbers came sawn lumber in sizes no stronger than need be and cut at a mill which supplied the needs of a community, instead of shaping the timbers at the site of each building. The felled trees were sawn into pieces in multiples of one inch thick and multiples of 2 feet in length. In about 1830 the braced frame of heavy timbers gave way to the "balloon frame" of 2 inch by 4 inch studs, extending in one length from the founda-

tion to the eaves.[20] The outside and inside studs, and also the floor joists were spaced either 12 inches, 16 inches or 24 inches apart so as to permit the use of a sawn standard lath 48 inches long for use on walls and ceilings. When about two generations later expanded metal lath came as a fire-resisting substitute for wood lath, it was made of a stiffness to span the studs of the old spacing; when "Beaver board," "Celotex," "Masonite" and plywood came, they too were in dimensions to suit the same spacing; even when metal studs came as a substitute for wood studs, they too were made of a stiffness based on the spacing of the wooden studs.

Another series of standard sizes developed in fire-proof construction—commonly a frame of steel or of reinforced concrete enclosed with masonry walls. The usual material for construction of the enclosing walls of such buildings was brick, the standard size of which was approximately 2 inches high, 4 inches thick and 8 inches long; so when structural hollow terra cotta blocks came in, as a partial substitute for brick, they too were made in multiples of the corresponding dimensions of the brick. When steel sash came, their width and height were such as to fit into a wall built of brick of standard dimensions.

The point is that the standard sizes of most of our building materials are not the outcome of characteristics of the materials, or of the most practical way of manufacturing, handling, or assembling them into the building under present day conditions; they are a relic of conditions controlling other materials and in many cases are unscientific and wasteful of material and labor. It does not follow that the unit sizes are always or altogether illogical, but it does seem probable that other dimensions determined by qualities inherent in the material and by present day building methods, might prove more efficient and more economical. If some common measure or "module" could be found for the units of materials of both mason and carpenter it might appreciably reduce the wide range of sizes which the manufacturer must produce. This would reduce cost. The American Standards Association has a special committee which is cooperating in this particular field with the Modular Service Association. They have found a common module, but its adoption is another matter.[21] The adoption in this country of the metric system for dimensions, volumes, and weights, etc. would in itself be a step toward greater efficiency—one long overdue. Ultimately it must come; why not now in the period of retooling?

*Building Codes—Origins and Standards for Improvement.*

Just as standard sizes of materials have perpetuated the sizes determined by conditions no longer existing, so local building codes exacting minimum requirements for the safe construction of buildings in general, and the special codes for special types of buildings (such as multi-family houses and places of public assemblage), have tended to perpetuate obsolete materials and methods. It would have been possible to have written these laws in such broad and flexible terms that they would have been applicable to changing conditions. They could have been written in terms of engineering principles and formulas, but actually they were written largely in terms of specific materials and specific dimensions—in terms of joists of certain sizes, bricks of a certain size. As it is, many new materials which are efficient and economical are illegal unless special dispensations or amendments to the codes are passed. If research invents a new material, the prospective producer must finance a national "educational" campaign to persuade municipalities (and such few states as have general codes) to change them. The cost of such an educational campaign, and the additional cost of the advertising campaign must be added to the cost of the new plant. The existing codes are a discouragement to the development of new and efficient building materials and methods.

Most of our building codes have a curious origin. They were devised in the first instance by the fire insurance companies to reduce fire hazards and losses to the companies, not by the public in protection of the people. In addition, the intention has been to make buildings safer in every way, to prevent collapse in whole or in part from defects in construction or design which might cause personal injury or loss of life. The Board of Fire Underwriters set up laboratories for determining the relative fire resistance of various materials, devices and systems of construction, and on the strength of their findings have issued labels to approved proprietary factory output. The use of such approved output lowered the insurance rate to the user, and was an inducement to manufacturers to produce products approved by the Fire Underwriters, and to owners to incorporate such products into their buildings, new and old. So far so good.

In order to meet new materials and methods, in time the inevitable changes came to be made in the codes. They commonly came as the result of pressure from the makers of new materials and were resisted by makers of the old. Political bickering was inevitable. Because the original law was stated in specific rather than general terms, the amendments have generally been in specific terms, and consequently they too in time become obsolete. To be a reasonable guide to the building industry, these codes should be stable, but they can be so only if couched in scientific terms, stating the essentials which must be met. Matters of interpretation and detail rulings should be left to a permanent board appointed for the purpose of keeping the code up to date. Such local boards might well be appointed by mayors, from lists of nominees furnished by the organizations of those professions and trades

[20] The earliest known date for a specific building of this construction is 1833. See, "Time, Space & Architecture," by Sigfried Giedion, Cambridge, Harvard Univ. Press, 1941, p. 268–77.

[21] Progress Report A. 62, Sept. 1940. Address: The Modular Service Association, 110 Arlington St., Boston, Mass.

most interested. Better still, there should be state codes, with state boards of revision. In 1943, in at least two states (Massachusetts and Connecticut) there were movements in this direction.[22] With the objectives thus unified, the research work might well be done and done more effectively by one research organization acting in the interest of both producer and consumer, including the insurance groups. This would require but little change in the activities of the National Bureau of Standards.

So far we have been considering general building codes, but in addition to these there are in many states separate acts such as those controlling tenements and places of public assembly. These have commonly been written in the same rigid and specific terms as the general codes. Connecticut, however, has a special act for plumbing, which is an exception to the prevailing type in that it is a brief authorization to the State Board of Health to regulate plumbing in the interest of public health.[23] Complete regulations, which are scientific, brief, simple yet adequate, and above all flexible, are issued by the Board and their enforcement is under the sanitary engineer of the department. Normally those municipalities which are large enough to maintain a building department with inspectors are not inspected by the state. The point is that the Act itself authorizes the broad objective in general terms and is so simple that it may be considered stable, but the regulations under it can readily be adjusted to meet changing conditions. It has become a tradition in Connecticut legislation that laws be simple and broad, and that responsible boards determine the details. This seems to us a highly desirable trend, worthy of general adoption.

*Work of the United States Bureau of Standards and Others.*

To remedy the existing situation in regard to obsolete and inadequate codes, the National Bureau of Standards of the Department of Commerce has long been active in various ways.

"It conducts research, makes surveys of the status of code requirements, and coöperates in the production of recommended minimum requirements suitable for general adoption. At the present time a complete series of such requirements is being prepared under the procedure of the American Standards Association with which the Bureau is coöperating. Fourteen sectional committees under the jurisdiction of the Building Code Correlating Committee are engaged in this work. Their membership comprises representatives of national associations of architects, engineers, and building officials, as well as of governmental agencies and other organizations having an interest in the subject. Through such activity it is hoped to produce recommended requirements that will assure safety while permitting all legitimate economies possible in building construction. These recommended requirements will be made generally available and should do much to remove existing differences in local codes."[24]

Under a special appropriation from Congress and in coöperation with the Central Housing Committee, the Bureau in 1934 inaugurated a program of research into (1) materials, equipment and method already in use in low-cost housing, (2) new materials and equipment and new construction methods. This research should assist in establishing minimum technical requirements for the elements of low-cost housing and should be of assistance in revising the regulations established under building codes.[25] We say "regulations under building codes" because we are convinced that the only type of code which is sufficiently flexible to keep abreast of the times is that type of legislation already referred to (such as Conn. A.582 b.) which in broad terms authorizes boards to establish the regulations necessary to carry out the intent of the legislation.

Back of all of the Bureau work is a long record of controlled tests, touching most of the basic materials used in building construction and much of the fixed equipment going into buildings, and more recently touching the performance of structural assemblies and combinations of materials under varying conditions of use. The traditional procedure of the Bureau has been to test products produced and supplied to them by private enterprise, but not to enter upon research. They did depart from this procedure in making tests of existing materials suggested by the USHA, and also did some valuable research for it in developing new building techniques. Unfortunately their findings were not generally circulated to the building industry. The need of research on a broad base we shall discuss a little later (*p. 188*).

The Forest Products Laboratory of the U. S. Department of Agriculture, within its own field of lumber, plywood, pulp board, etc., has been conducting scientific research into the qualities and the possible further uses of woods, research which has furnished data for new and economical construction. Under the impetus of war production the Laboratory has, from the basic elements of wood, produced new synthetic products which give promise of revolutionizing the use of wood in the building industry.

We comment elsewhere on the housing research done by the Department of Agriculture. (*See pp. 236, 239*). At an intermediate level between the research by large manufacturers and that by federal agencies, are the Albert Farwell Bernis Foundation in the Massachusetts Institute of Technology, the Housing Research Laboratory of Purdue University, The Pierce Foundation of New Haven and New York, the first

[22] The Connecticut Legislature authorized such a revision by the State Housing Authority.

[23] Regulation #137 of Conn. State Board of Health, issued pursuant to Section 584 d of Conn. Public Acts of 1937, pertaining to drainage and toilet systems.

[24] "Technical Activities of Government Agencies Concerned with Housing of Special Interest to Architects." Central Housing Committee, Washington, D. C., Sept. 1939, p. 21.

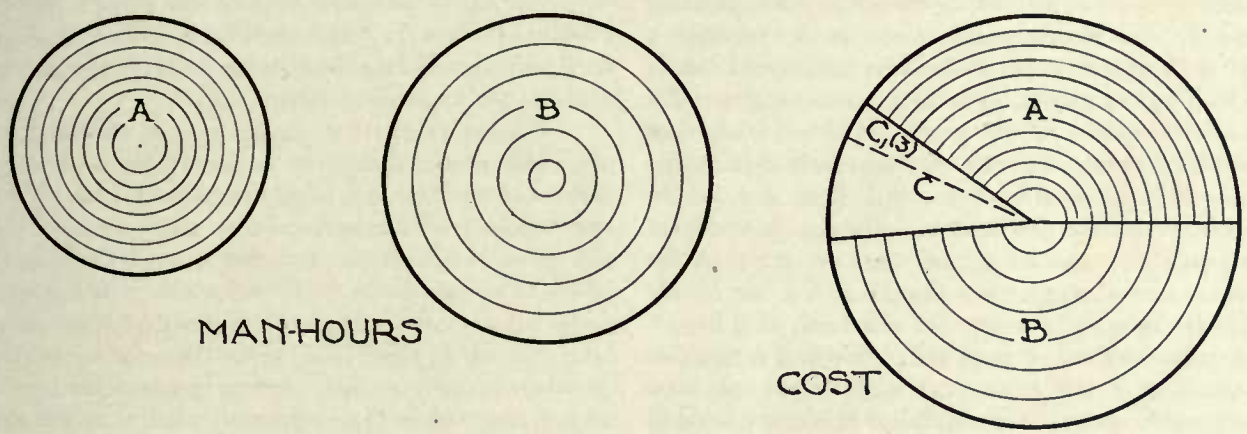
[25] See Letter Circular L.C. 502 of National Bureau of Standards, "Research Program on Building Materials and Structures, 1937–1938."

two of which have emphasized research in prefabrication, while the last has approached all types of construction and technique, including heating. The effect of prefabrication on labor will be discussed shortly.

*Labor: Relation of Labor to Costs and Rents.*

It is labor's wage in the industries producing building materials, in the transportation of materials and in their assembly at the building which makes up the greater part of the original cost of building. USHA has calculated that 40 per cent of the cost of PWA housing went for the "direct labor" at the site, about 12 per cent for the contractor's overhead and profits; from unskilled labor many of those eligible for public housing, from skilled labor many of those occupying the more modest private housing. It is the laborer's wage which must pay the rent. In recognition of this situation from coast to coast, in over a score of cities, various unions have established preferential scales of wages for residential work.[26] But in the total picture this indicates only a trend, possibly induced by an influential number of individuals who may have been interested in acquiring homes. The others would be more apt to feel that their interest in maintaining a high wage scale is more important than their interest in low rents.

GRAPH XII. EMPLOYMENT CREATED BY $100,000,000 OF HOUSING CONSTRUCTION*




| | | | LABOR |
|---|---|---|---|
| A. Man-hours of labor at site | 40,000,000 @$1.00(1) | = $40,000,000 | 40% |
| B. 1. Raw material | | = 6,000,000 | |
| 2. Processing and transporting of material | (2)48,000,000 @ 0.70(1) | = 42,000,000 | 42 |
| C. Contractor's overhead and profit | | = 12,000,000 | 3(3) |
| | *Total* | $100,000,000 | 85% |

(1). average. (2). gathering and processing raw material, transportation. For proportion of labor, see text above. (3). ¼ of C is assumed by this author to be specialized labor.

* Based on a graph on p. 8, Labor Information Bulletin No. 8, Vol. 5, illustrating "Labor and the Housing Problem", by Catherine Bauer; source of data the PWA program. The tabular breakdown of costs and of C in the Graph is ours.

about 48 per cent for building materials brought to the site. All this is graphically shown in Graph XII, above. Of the 12 per cent for overhead and profit some portion was for wages, direct and indirect (clerical work of many kinds). This we may reasonably estimate to amount to at least ¼ of the 12 per cent, or 3 per cent of the total cost, making a total of 43 per cent for the local cost of labor in the building operation. The indirect labor, the report estimates, amounted to 60,000,000 hours, which at an average wage of 70¢ per hour would mean $42,000,000, or 42 per cent of the total cost. These "indirect wages" added to the 43 per cent for "direct" wages means 85 per cent of the total cost of the building for labor's wages—a rough estimate but more likely low than high.

In another way labor, with labor's families, is a vital factor in the housing program. From the labor group come most of the occupants of low-cost housing,

*Hourly Wages vs. Annual Income.*

In principle, if the cost of construction were reduced or if labor's annual wage were appreciably increased, labor could pay increased rents so that, other things being equal, more laborers could pay rents at cost, without subsidy. Furthermore, as we have pointed out in an earlier chapter, some could even pay a rent including a limited profit on the investment. But other things might not remain equal, for if the increased annual income came through an increased hourly wage, the cost of the building would be increased, and the increased cost would be reflected in higher rents and higher costs to the home owner. So we find ourselves facing a stubborn problem: how to increase labor's income without increasing the cost of housing, or how to reduce the labor cost of housing

[26] See Table 32 in "American Housing," *op. cit.*, p. 405.

without reducing the income of those renters who are in the building industry. It would be ideal if we could both increase incomes and decrease rents. Such a condition would tend to improve the general scale of living; and the consequent increased spending would increase production, not only in the field of durable commodities, such as housing, but also in the field of consumer commodities such as food and clothing. To bring about these conditions is *not* in the realm of Utopia.

The British accomplished that very thing, by that very method, on a fairly large scale, through a long-range program of housing for families of low and moderate incomes as narrated in the chapter on Housing in England. Such a program made possible the assurance of steady employment in the building industry, and steady employment made possible a larger annual income to skilled and unskilled labor in the building industries, even with the acceptance of a somewhat lowered hourly wage. With a steady flow of work, crews of men, or the key men trained in special types of work, were able to shift from one job to another, even from city to city. The contractors were in a position to pay an annual wage greater than the previous annual wage, even though at a lower hourly rate. Because the government was back of a known long-range program of great size, labor had reasonable assurance that the contractor could make good on steady employment. Former Prime Minister Churchill once announced that his Government proposed this same policy for a twelve year period following the war. (March 26, 1944). This method has been discussed in this country, but because there has been no assured long-range program for a large enough volume of work, labor has not been willing to consider lower hourly wages.

In this country this subject has come to the fore in recent months. The editor of *The Architectural Forum* wrote: "Construction workers who move from job to job get high hourly wages—sometimes as much as $2 an hour. But in 1940 half (200,000) of all free-lance construction workers earned less than $600 each. Some 98,000 earned less than $1,000 and only 14,000 (3 per cent) earned $2,000 or more. Workers employed on contract construction or maintenance get only slightly better yearly earnings. Of 90,000 workers, more than half had earnings of less than $1,000 each in 1940.

"Suffering more than any other industry from seasonal and cyclical fluctuation, Building has never found the way to provide year-round employment for its labor or its equipment. Building economists have long argued that a guaranteed annual wage is the best way to end restrictive labor practices that help to keep building costs high."... "But the giant construction industry is made up of hundreds of thousands of small contractors who lack the capital to maintain year-round building organizations. Nor have building trades workers, cautiously clinging to high hourly wage rates, generally shown much willingness to compromise. The drive for a guaranteed annual wage has been spearheaded by the three big CIO unions—steel, automobile, electrical and radio workers—and by United Mine Workers, all of them operating in industries where large capital accretions hold the promise that year-round employment may someday be written into a union contract". The editor adds that there are "signs that a guaranteed yearly wage would have support from some progressive AFofL building tradesmen"...

Some tentative beginnings proposed include:

"Use of public works as an experimental laboratory for working out a year-round employment plan that might eventually apply to private enterprise. Organization of co-operative builders groups like the 16-member firm in Oklahoma City (Allied Builders, Inc.), who would be able to team together in signing a contract for year-round labor.

"Some think that fluctuation in Building employment would always be as inevitable as weather. But meat packing is a highly seasonal business (cows and houses take longer to rise to meet demand than any other commodities) and the Hormel Packing Co. is one of a half-dozen U. S. industries now operating under an annual wage plan. Hormel's 5,000 workers take days off in slack time, make them up by working overtime in busy season. Labor turnover, as high as 55 per cent before the year-round plan, was less than a half of 1 per cent in 1940."..."80 per cent of all Hormel workers are home owners." At the request of President Roosevelt, the Office of War Mobilization and Reconversion looked into the matter, and for a study of the situation appointed a Committee of Four representing employers, labor, farming, and the consumers.[26a]

In northerly countries building is traditionally a seasonal occupation. Excavating and most of the mason's work is done most efficiently and economically when not handicapped by frost, snow or rain, and the carpenters and other trades must wait for the foundations and walls. The German Reich found a way to overcome the seasonal unemployment thus created in the building industry. The work of rehabilitating obsolete buildings, principally in the larger cities, was scheduled for the winter months, most of the work being on the inside of the buildings. This program was under taken at a time when the Reich did not find itself in a position to finance new housing on any such scale as the British—its funds being diverted to other ends. This aid could be applied to advantage in our own northern cities, provided we had an adequate housing program.

*Standards of Efficiency.*

The efficiency of labor, or the amount of work of a standard quality done per hour, is another important factor of cost. Before the first world war the cost of labor at the building was commonly computed on the average as about the same as the cost of the materials

[26a] Architectural Forum, April, 1945, p. 6.

installed, each including its share of administration costs. For a period after the war it was computed at 40 per cent for labor and 60 per cent for materials; in recent years it has been computed as 60 per cent for labor and 40 per cent for materials, and this despite the fact that more and more of the materials were coming to the building in prefabricated units or in packages for quicker handling, requiring less labor at the building and more in production. A number of factors have entered into this change. The period after World War I, when there was a shortage of labor, was characterized by a more frequent adoption of "efficiency methods," scientifically worked out for reducing the number of movements in each operation of handling materials and fitting them into place. This made possible carrying out each job with less labor, thus tending at the start to increase unemployment, in periods when there was a surplus of labor. But it tended also to stimulate more building by reducing costs, and thereby increased employment.

After the revival of business in the middle 1930's and to meet this tendency for the employment of less labor on each job, which had gradually been growing, organized labor stiffened up many of its rules to prevent "speed-ups." Back at the turn of the century a skillful bricklayer under reasonably favorable conditions would lay one thousand or more bricks in an 8-hour day. After the anti-speed-up rules had been in effect for some time, this number was cut about in two, and so the cost of the labor per thousand brick doubled. The effect of this on costs is illustrated in the case of one large building erected during the depression, when the building promoters estimated that they could afford to put up the building only on condition that they could get contract prices appreciably lower than the original bids. To coöperate in the project and keep labor employed, organized labor agreed to relax on some of their rules and it was reported on good authority, that whereas the contractors originally estimated 450 bricks a day per man, under relaxed rules they estimated they could count on 800. Actually over 1200 per day were laid.

One of labor's objections to the speed-up is the obvious fact that by abuse it becomes detrimental to the health of the worker. The other objection is that it causes the men "to work themselves out of a job." Between the extremes of speeding the work at a pace which is detrimental to health and lagging along with the work in order to string out the job,—between laying 450 and 1200 bricks per day—there must be a reasonable mean. As an alternative measure to attain speed and accuracy and also to share their advantages with the worker, some industrial employers operate on a system of a minimum hourly wage based on an average, reasonable rate of output, plus a bonus for a higher output and quality, so that a worker has an incentive to increase his skill, with a possibility of increasing his income, while the employer profits by a more efficient use of his plant and organization. Organized labor has not generally approved of this method.

As all too frequently applied, organized labor's anti-speed-up policy results in a tendency toward scarcity of production and in unnecessarily high prices. In the long run, "scarcity production" is beneficial neither to labor nor to the country as a whole. Also bearing on the problem of cost and scarcity is the available supply of men in the building trades and the training and employment of apprentices. So long as trained craftsmen were without jobs, as during the depression of the early 1930's, an increase of apprentices in the building trades did not appear important; but under the greatly increased activity in building in the post-war period of World War I, it became apparent that a lack of trained men in the building industry was slowing up the work, raising prices, and leading to a substitution of other materials and methods. Very certainly it would lead to a wider use of prefabricated unit parts. The *joint apprenticeship committee system*, when properly worked out in connection with public trade schools, seems to offer an effective method of gauging the need of the supply of skilled workers and of meeting the demand, without an oversupply.[27] The *commission system* has seemed to be less fruitful.

*Labor Friction.*

New materials and new methods of assembling materials both new and old, should contribute to economy and efficiency in the construction of buildings, but actually they have also introduced certain new obstacles to speedy construction. This is because of disputes among the various trades and crafts, disputes as to which special trades should be allowed to handle the new materials. These jurisdictional disputes have been going on for many decades. Laths were originally of wood; when metal lath was introduced, the question was raised whether the traditional lathers or the metal workers should erect it. Should carpenters be allowed to set the metal bases between plaster and wood floor or to erect light pressed or expanded metal joists requiring no field rivets? For those craftsmen who are in the labor union, all such questions are referred to a central committee of the union, but their decisions have not always been accepted by the men. The result has often been jurisdictional strikes, causing serious delay to the work, delays which string out the administrative and other costs of the work. On USHA-aided projects labor organizations agreed to no jurisdictional strikes and no strikes for higher wages after the bids were taken. For the most part, but not entirely, these agreements have been lived up to by the men. This is reflected in the good progress and low costs which have generally obtained in these projects. In somewhat the same category as jurisdictional disputes are arbitrary rulings by the unions, such as demanding plastered ceilings on the under side of concrete floor slabs. Aside from jurisdictional strikes, general strikes added materially to the cost of the housing produced under the Housing

[27] "Apprenticeship in Building Construction," Bull. 459, U. S. Department of Labor, 1928, p. 4 et seq.

Division of PWA. Delays from whatever source increase the cost of building.

There are delays, friction and rackets arising out of the very complexity of buildings. In the construction of a house the steam heating system alone has about as many parts as an automobile and added to these are the equally complicated plumbing, electrical systems, intricacies of the structure itself and its finishing, in all of which work the various trades must follow one another in their proper sequence. The metal lathers may be impatiently waiting for the concrete men to finish the floor slab and the concrete men waiting for reinforcing bars from the steel mill. These all add to the friction between the various trades themselves, between trades and contractors and between material men and contractors; it makes possible hold-ups or rackets on the supply of both labor and material.

*The Effect of Prefabrication.*

Prefabrication tends to reduce the labor done by the building crafts at the building and to increase labor at the fabrication shops, usually concentrated in centers at a distance from most of the local building activities. Because of the use of machinery, the time employed on a given piece of work at the factory is far less than at the building. As it is applied today, prefabrication consists in preparing, with machinery at the shops, units of building materials or construction of such sizes as one or two men can handle without the aid of mechanical power: windows prefitted into the window frames, with all the hardware and screens complete, plywood lumber in larger sizes but still such as one man can readily handle, roofs of frame buildings and partitions for all types of buildings in prefabricated sections, and so forth. Except through such units, the prefabricated building is not yet on the market in a large way. But even the prefabrication of the parts alone reduces the amount of labor on the job, and should reduce the total cost of construction. These methods have brought about a competition between hand work and machine work. The less efficiently and less rapidly hand work does the work now remaining for it to do at the building, the more rapidly will prefabrication advance. Requirements of war emergency production have given a new impetus to the prefabrication of a greater variety of units, and to units and sections of larger size, but these larger units are available only within a limited distance from the point of fabrication.[28]

A pioneer in the study of methods for improving low-cost housing and in reducing costs, Grosvenor Atterbury, makes these observations: "In mechanizing construction, we are implementing the laborer and increasing his productivity and consequently his wages, which is not a theory but a fact, proven by what has happened in our great organized industries.

"But labor will benefit not only directly but indirectly, for in radically reducing building costs we are curing a serious dislocation in our existing industrial and economic structure. . . .

"Expressed in money as the measure of value, his housing dollar is worth about 50 cents as compared with that of his food dollar and his clothing dollar. So he buys almost anything but housing. He can neither afford it at the price nor see in it good value or a fair bargain. Even his luxury dollar has double the purchasing power of his housing dollar, and it is not surprising if he buys automobiles, radios and electric refrigerators, and continues to live in a second or third-hand building. . . .

"Until the building mechanic is implemented and the production of his housing is mechanized on an organized and scientific basis in place of the present wasteful, out-of-date methods, this situation will continue—an economic dislocation that blocks the way to the greatest and most profitable unsupplied market in this country today. . . .

"This, of course, means a technical revaluation in housing production, but it can be done. It is, of course, a very complex problem—by no means confined to construction alone. It cannot be solved by government, nor commercially, except through tedious years of trial and error. Only independent, unhampered, scientific research by the brains in the country can accomplish it satisfactorily. . . ."[29]

With Mr. Atterbury's statement that the reorganization can be accomplished only by scientific research, probably all will agree, but with the statement that it cannot be done by government, we must take exception. The very size of the undertaking and its importance in national economy would seem to make that the only feasible and logical method; for what is government but the medium for carrying out the concerted and organized will of the people. How good a job can be done by the government is indicated by the work of the Forest Products Research Laboratory, of the U. S. Department of Agriculture, previously referred to on p. 184. The research work done in all fields by the Department of Agriculture has been outstanding over a long period. The size of the job it has been doing is shown by the size of the appropriations—in 1937 and 1938 it amounted to about $20,000,000. Incidentally, these figures suggest the size of the research job needed for the building industry, which in size is next largest to agriculture. The Kilgore-Wagner Bill (S. 2046) introduced into Congress in 1944, provided for a housing research on just such a scale, a scale on which it could not possibly be undertaken by any privately endowed organization. Some possible adjustments between which we may choose are (1) continuous employment resulting in higher annual income, such as

[28] For a discussion of the present status of prefabrication, see: "Proceedings of the National Conference on Postwar Housing" at Chicago, Mar., 1944. Nat'l. Committee on Housing, Inc., 512 Fifth Ave., New York 18, N. Y.

[29] "The Scientific Approach to the Problem of Economic Construction," Grosvenor Atterbury, F.A.I.A., N.A., in *Journal of the Am. Inst. of Architects*, The Octagon, Washington, D. C., Sept. 1944, pp. 141–142.

would result from a continuous building program; (2) a higher hourly wage during the periods of employment; (3) public subsidies for the necessities of decent living—for public housing and, during periods of unemployment, for public relief. The first of these is definitely constructive. In principle, the second suggestion which would put this unskilled group on a self-supporting basis, would seem preferable to the third, that of adding to their incomes from the common treasury; yet to a considerable extent that is what we have long been doing, either indirectly or directly. It seems doubtful that the minimum provisions of the Federal Wages and Hours Act will affect those of this group most of whom live in cities where costs of living, and consequently subsistence wages, are greater than in the smaller industrial communities—where the minimum wages envisioned in the labor act seem mostly to apply. Whatever advances may be seen in a long-range view of the situation, at present the answer seems to be subsidized housing and relief.

*Unskilled Labor.*

As we pointed out in the chapter on Incomes and Budgets, the wage of skilled labor, when reasonably steadily employed, is usually sufficient to sustain the family budget, including normal rents for good housing, while unskilled or common labor usually cannot so support itself unless fully employed throughout the year; and many laborers can not do so even then. Moreover, unskilled labor is more subject to intermittent employment than is skilled labor. Skilled labor is not always easily replaced and the employer often makes every effort to hold on to what he has; unskilled labor on the other hand may be easily replaced and must rely on its versatility to keep in work. The result is a tendency for the unskilled laborer to put his children to work before they have completed their schooling and for the wife and mother to work out, where possible.

Unless some adjustment can be made, a large proportion of this unskilled labor group of our citizenry must continue to live and rear their children in degraded surroundings and on incomes insufficient for decent living in general.

*The Need of Labor Reorganization.*

Labor, like every other branch of the building industry, needs a thorough reorganization in the interest of the consumer public, of which labor is so important a part, and in the interest of labor itself as such. This is aside from the abuses which occur from time to time on the part of the unions officially, but more often on the part of the men who fail to abide by official rulings, on the part of officers and agents acting autocratically in overreaching the authority delegated by the men. The so-called labor "rackets" generally arise from such abuse of authority—sometimes from the abuse of a position of political leverage. Not only is the cost of labor's homes involved, but through higher taxes for subsidized houses the cost of all their living expense is increased. These abuses are a form of lawlessness, many of them being in effect a restraint of trade, for which, in common with other branches of the building industry, the labor element involved has come under fire by the Department of Justice. The shortcomings of both management and labor are forcefully summarized in "A Warning to Labor—*and* to Management," by Eric Johnston.[30]

*Summary and Conclusion.*

It is labor's wages that account for most of the cost in housing and unskilled labor's wages pay rent in low-cost housing. But unskilled labor's annual income is so low as to make subsidies necessary if their families are to live in decent houses and decent neighborhoods. Yet it seems to be possible to reduce the labor cost of housing without reducing labor's annual income; first, by increasing the number of annual hours of work and paying for skilled labor at a lower hourly rate; second, by turning out more work per hour; third, by the elimination of certain inefficient practices, such as jurisdictional and some other strikes, and arbitrary union rulings prejudicial to new types of construction and finish. Some of these measures labor has taken steps to put into practice. But labor alone cannot bring about the savings arising from a long-range comprehensive building program. A federal housing council, with congressional support, and an adequate research department could do much to accomplish the desired end.

## Land Costs and Taxes

*The Basis of Values, Real and Speculative.*

Land values affect low-cost housing at several points: (a) in the selection of land for new projects and in the density of their development; (b) in the effect of high land values on the deterioration of housing in obsolescent neighborhoods; (c) in the rehabilitating of obsolete neighborhoods.

The value of any land, of all land, has its origin in: (a) certain inherent qualities of the soil, (b) its immediate topography and (c) its relation to other areas and to the center of demand. For building purposes the inherent quality of land has no bearing on its value, except as soil conditions may affect the cost of foundations. Topography has some bearing, but the advantages of rolling land are often lost to most of the occupants of land densely built up. Location in reference to some center or centers of activity is the chief factor in the value of land used for building. In some densely crowded metropolitan areas of our American cities, the land for new buildings may cost more than the buildings on the land. These high costs have at times created a difficulty in locating housing projects in the old slum clearance areas. That the prices are

[30] Chamber of Commerce of the United States, Washington, D. C., Mar. 1944.

artificial is evidenced by the fact that the properties may pay no profits, and are often in arrears for taxes because of lack of adequate returns on the property.

The value of urban land due to proximity to centers of demand results from the existence of the population and the various facilities made available because of the population—streets, sewers, electric lines and gas mains, transportation, fire, police and health protection, schools and other community facilities. Moreover it is generally true that the nearer the land is located to the center of population the greater its availability for a variety of uses and for intensive uses, and the greater the population the greater the demand for centrally located land. Thus a prospective growth in population leads to a prospective increase in land values. This is why urban land has been so attractive a field of speculation and why its values have been determined largely by speculative considerations. The fall in the rate of population increase, as disclosed by the interim census of 1935–36 (see chapter on Population) and the movement toward the suburbs was an unforeseen element in the speculation and has tended to deflate speculative prices. The over-intensive use of land, which is coupled with inflated values, has been discussed in the section on the Pattern of Urban Growth and Obsolescence and will be further discussed later in this chapter.

Early in the recent depression in our larger cities we were astonished to see buildings, apparently substantial and good for many more years of service, razed to the ground, leaving gaping vacant lots in thickly built up neighborhoods. This was of course to avoid the taxes on the buildings, which commonly were higher than on the land. The depression had cut down both the rate of rents and proportion of them which could be collected. Usually the cleared lots came to be used for parking areas, occasionally for filling stations, which are not efficient uses of land provided with all the many public utilities and community facilities. Owners commonly looked upon the new uses as a temporary means of paying the taxes on the land and of preventing foreclosure on the land itself—often the major consideration in speculative purchases.

In numerous cases, however, the greatly reduced income from obsolete buildings did bring about foreclosure for both taxes and mortgages. Many of the mortgaged properties were thus thrown back on the lending institutions. Their plight was made worse by the fact that it was a common practice among these institutions not to amortize their loans but to depend on what was considered the normal increase in land values (due to population increase) to make up for the loss taking place through the obsolescence of the buildings. Under these circumstances it is anomalous that taxes on the buildings should commonly be higher than taxes on the land, seemingly due to a fundamental lack of understanding on the part of the tax assessors. Says Harold Buttenheim, a keen student of civic problems and particularly of taxation: "No system of taxation can fail to raise or retard housing standards."[31]

One of the most influential factors in maintaining these speculative land values is that they have been accepted by the cities for land tax assessment. Any sudden and general deflation of land values does not seem feasible, because the income of the cities would be forthwith deflated and either taxes on other property would need to be raised, or some source other than real property would have to be found for the income, such as the sales or the gas tax. Otherwise, the amount of city services to the public would have to be proportionately reduced, or an increased debt burden incurred—neither of which would be popular. To solve this problem, a local income tax was adopted by Philadelphia in 1939.[32]

*Methods of Taxation—Graded Taxes.*

There is no one universal system of taxing real estate. In England the tax is based on the income of the property and is commonly paid by the tenant. Various remedies have been proposed in this country. It was some seventy years ago that Henry George proposed a single tax on the land only. The proposal has intrigued many and now has an interesting offspring in the graded tax system, of which more presently. The original idea was that by taxing the land alone, regardless of the improvements on it, owners would be induced to develop the land to the greatest degree of efficiency, and would have an incentive to keep their properties always at maximum efficiency, and because there would be no taxes on improvements, owners would be encouraged to make them. Moreover, should the building or other improvements become obsolete, the city taxes would not be jeopardized. Since taxes would be based on the best potential use, there would be less chance for land speculation. Suburban land would be kept in agriculture until actually needed for building, and all central land would be in constant intensive use. Despite a group of enthusiastic supporters, the system, pure and simple, seems to have made little or no headway. Probably the nearest approach to this system is that in New Zealand, in which the central government places a graduated tax on the unimproved value of land and the local authorities tax the unimproved income value of land.[33] The principle, however, is applied in modified form and with apparent success in a taxation system adopted in Pittsburgh.

As far back as 1913 Pittsburgh adopted a "graded tax" plan (authorized by an act of the state Legislature) to gradually take more and more of the

[31] "Relation of Housing to Taxation," in "Low-Cost Housing and Slum Clearance," published in *Law and Contemporary Problems*, Duke University, Durham, N. C.

[32] "Income Tax Ordinance," Philadelphia, Clerk's Office, City Hall.

[33] See "New Zealand's Experience with Land-Value Taxation," by Hon. Walter Nash—an address before the Am. Institute of Planners and Citizens Housing Council of New York, Jan., 1943.

tax off the buildings and put it on the land—involving, of course, separate taxes on land and on buildings. The tax rate on the building ultimately was to be one-half that on the land. The operation, begun in 1914, was completed in 1925, "not by reducing the assessed valuation of buildings, as commonly assumed, but by fixing from year to year a lesser tax rate on buildings than that levied on land." It was accomplished in five successive steps, corresponding to the triennial assessment periods. The success of the system was generally recognized by both political parties, by business groups and by the real estate board. It is still in operation. The record since 1914 shows that the revenue produced has increased in about the same proportion as the population. The present assessor, who has been on the board for many years, has stated that the system "has been influential in inducing those who held large tracts of idle land to sell at more reasonable prices," and that "it has prevented such inflation as we have witnessed in our own community in time past and such as has taken place in other large cities in recent years. . . . Apartment houses almost uniformly show savings, . . . but it is the home owner who stands out as chief direct beneficiary[34] . . . . We believe that the rate on buildings has had a considerable influence in encouraging the erection of new buildings since 1914."[35] The system has not prevented Pittsburgh from building slum clearance projects—though it did cause some delay due to the necessary readjustment of the relatively high land values.

A study of the hypothetical effect of graded taxes on fifteen municipalities was made for the National Resources Committee by George A. Blaire, under the title "An Analysis of the Effect of Graded Taxes in Certain American Cities."[36] The conclusions which Mr. Blaire drew from these studies were in a broad way similar to those which we have outlined in the preceding paragraph.

The perpetuation of inflated speculative values by the tax assessors makes the tax system of pressing interest in determining the location and density of housing and all other types of building. Taxation on the basis of earning would seem to be essential to any sound system of taxation.[36a] That, however, would still leave the desirability for some logical readjustment between the assessed value of the land and the buildings. There is an old rule of thumb that for a single residence built in more open neighborhoods the land cost should be one-fifth the cost of the building; the ratio diminishes as one approaches the rural areas and increases for centrally located apartments. By and large the ratio has ranged from about one-tenth to one-fourth.

*Taxes and Public Housing.*

The situation of inflated assessed values is well illustrated in adjusting the assessments for many slum clearance projects. Under the U. S. Housing Act of 1937 the municipalities, in making their annual contributions toward rent subsidy, have the option of paying cash or remitting the taxes on the property. Almost invariably they have chosen to remit taxes, because they have commonly found that the taxes which have in recent years been actually collected on the properties to be demolished have amounted to relatively little (regardless of the assessed value), so that the actual loss in taxes is little. Even on the assessed valuation, the loss may be negligible. This is well illustrated in the case of New Haven. Here the total taxes levied as of 1938 were $308,276,000. The assessed value of the three housing sites was $1,500,000, netting the city (if collected) $41,250, or slightly less than one-half of one per cent of the total levy, which means that the three projects will cost the taxpayer annually an additional 50¢ on each $100 of that which he now pays. Against this small extra charge are the savings in various municipal departments which are listed in an earlier chapter. Over and above all this are the social gains. The actual cost in dollars is relatively small, the social gains are great.

The issue of subsidies for public housing rests on the recognition of the importance of a wholesome environment for our citizens, particularly the rising generation. Once the public recognizes that the home environment has an importance comparable to public education, they will supply the necessary funds as a matter of course, just as they have supplied the funds needed for public schools.

All forms of government are based on the assumption that the coöperative effort of groups of people are more effective and more economical in supplying many needs and desires which all have in common and which are essential to a well operating community, of whatever magnitude, from villages to nation. The test of the economy is whether or not these needs and desires can be met at less cost through a public undertaking than through private undertakings. To the extent that public undertakings meet this test, the taxes collected for their support are less than the cost would be to individuals if each supplied and paid for the same services individually. For example, it is more economical, as well as more sanitary and more civilized, to have a public sewerage system than for each property owner to install and maintain a cesspool. Thus in

[34] "Pittsburgh's Graded Tax in Full Operation," Percy B. Williams, member of Board, Pittsburgh Taxpayers' League, 1309 Berger Building, Reprint from National Municipal Review, Dec., 1925; date revised to 1929.

[35] P. R. Williams quoted in "How Graded Tax Plan Works in Pittsburgh." W. Fairchild in American City, November, 1938.

[36] In "Urban Planning and Land Policies," Vol. II of Supplementary Report of the Urbanism Committee to the National Resources Committee, Part III, Appendix E, p. 361; U. S. Government Printing Office 1939.

[36a] The Pittsburgh Housing Authority arranged for a tax of 5% on the "Shelter rent" income, which paid the city for "Services rendered."—"The Pittsburg Housing Authority," Pennsylvania State College Studies #14, by M. Nelson McGeary, Ph.D., Asst. Prof. Political Science; 1943, p. 35.

theory the taxes which support public undertakings are a profitable investment for the individuals in the community.

The foregoing statement may seem over-simplified and unreal to those who are impressed by room for improvement in the efficiency of public administration and by the fact that, under our traditional system of taxation, the public collects its taxes from only part of the people. But even the most inefficiently operated sewerage system is still far more economical to the owner than would be his own cesspool. Also the individual landlord is reimbursed for his tax by charging it into the rent, so that actually the family head pays the full real estate tax when he pays the rent, despite the fact that it is not a separate item, as in a sales tax. It might clarify our thinking if, as in England, the tenant paid the tax directly. That such a change would be more complicated is indicated by the recent experience of 1944 in direct collection of taxes on incomes less than $5000. The means of collecting any tax is of importance only as a matter of convenience and of administrative efficiency.[37]

Since through large-scale operations public administration can achieve economies in undertakings needed or desired by the public, under an efficient government, the more of its needs and desires that can be undertaken in common the further the income of each individual will go. And again, provided government is efficient, the higher the taxes the greater the extent to which the individual is taking advantage of the economies of large-scale undertakings. Personally, because I realize this fact, I take more satisfaction in paying my tax bill than any other bills; I realize the advantage because at some time in the past I have had to install and maintain private roads and private sewers, have helped to sustain private schools, and have travelled over dirt roads before a gasoline tax gave us hard roads for fast travel.

What is of fundamental concern to the tax payer, which means every self-supporting individual, is (a) the efficiency of public administration and (b) an equitable, convenient, and efficient medium for collecting the taxes. True, high taxes may result from inefficient administration, but they may also result from the undertaking by government of things which if left to private initiative would cost more or would be left undone. Put in another way, with efficient administration high taxes may represent economies to the individuals of the community.

*The Over-Intensive Use of Land: Sir Raymond Unwin's Studies.*

The over-intensive use of urban and suburban land, and the possibility of so using it, has been a principal cause for over-valuation, as we have previously pointed out in the chapter on Pattern of Urban Growth and Rehabilitation. Early in the development of the town planning movement in England, Sir Raymond Unwin pointed out that there was no economic justification for over-intensive use, and many social disadvantages. He showed that twelve families to the acre was a reasonable maximum density for most urban and suburban areas, and, particularly in Great Britain, that has very generally come to be a standard of reference—except in the more central areas of large cities. As a frequent visitor and of late years, a part-time resident in the United States, he has here also studied the existing land situation and suggested improvements.

Several years ago Sir Raymond pointed out that if the entire population of the United States were to be housed in one community on the basis of twelve families to the acre, the area required would be only a small fraction of a state of average size. As of 1940 the population would just neatly fit into an area equal to that of the very small state of Connecticut—if the area were all topographically suitable. Just before his death in 1940 he wrote on the effect of over-intensive use of land in Chicago and in New York.[38] The picture is as strange as those in Alice in Wonderland—though for the most part couched in the language of the technician:

> "So long as the supply of butter is ample, each possessor of a slice of bread feels fairly sure of his share, and is not too much concerned with the thickness which his neighbor spreads on his slice. When, however, the supply runs short, all are interested in a fairly even distribution; if too much is spread on one man's slice, other slices will get none. That is exactly the position in regard to land value today. The total in sight is becoming more limited; and if too much is spread on a few plots of land, many other plots will inevitably be deprived of a share. This relative scarcity in the supply of value has therefore given fresh importance to the relation of density of building to concentration of value, and the extent to which high density tends to locate the total available on a few favored plots, at the expense of the general body of plot owners."

He then takes us to Chicago:

> "The population of the central area of Chicago has been diminishing for many years. The census of 1930 revealed an area of nearly 50 square miles over which such decrease had occurred. . . . Of this central area, 44 square miles are now classed as definitely blighted, and they are entailing a huge loss to the city. The total developed area of the city is 157.77 square miles, and of the suburbs outside, which constitute an integral part of the city geographically, 76.50 square miles, making a total of 234.27 square miles.
>
> If the area occupied by commercial buildings in the city itself in 1923 be compared with the total area so occupied in city and suburbs in 1936, the result is an increase of 3.74 square miles in the 13 years, or .3 square mile per year."

[37] Having heard one eminent tax expert criticize the Philadelphia local income tax as "unsound," the author, at the Chicago Postwar Housing Conference, asked Professor Leland if he considered it sound. His reply was: "Well, it will get revenues. As an alternative between that and a state-administered income tax, I would say that a state-administered income tax, with a division of proceeds, would be even better, but it goes back to the problem that if you cannot get good taxes then bad ones will yield a lot of money." Nothing could be worse than taxing on inflated real-estate values.

[38] "Land Values in Relation to Planning and Housing in the United States." Sir Raymond Unwin, *Journal of Land and Public Utility Economics*, Vol. XVIII, Feb. 1941. We have omitted the footnotes.

Sir Raymond further pointed out that if in the future this rate of growth could be concentrated in the central area, it would take 146 years of such growth to redeem, with commercial use, the 44 square miles of blighted area. At present it is commercial use alone which yields the very high land values in the central areas.

"If the actual increase in commercially used land within the city limits only had been taken, the figure would have been less than 0.2 of a square mile during the whole 13 years and the period required to cover the 44 square miles would exceed 1,500 years.

"How then would the picture look if residential use were adopted? . . . If 100 families to the acre were copied from some New York schemes, 187 years would be required to fill the 44 square miles of blighted area when population was increasing at the rate of 60,000 and dwelling units at the rate of 15,000 per annum. Lesser densities would, of course shorten the period as shown in Table XX."

TABLE XX. TIME REQUIRED TO OCCUPY LAND IN THE CENTRAL BLIGHTED AREA OF CHICAGO, IF TURNED TO RESIDENTIAL USE AT SEVERAL DENSITIES

| Density per Acre | Absorption Period |
|---|---|
| 50 families | 93.5 years |
| 25 families | 46.7 years |
| 10 families | 18.7 years |

For New York Sir Raymond made a study showing the number of years which would be required to occupy the 61.71 square miles of unoccupied land, on the basis of rate of population increase of 1920–1930 and that of 1930–38, and figured this for three rates of density (Table XXI).

TABLE XXI. TIME REQUIRED TO OCCUPY 64.71 SQ. MILES OF UNOCCUPIED LAND IN NEW YORK, AT SEVERAL RATES OF RESIDENTIAL DENSITY

| Density of Families per Acre | Years Required at an Annual Population Increase of 131,040 (1920–1930) | Years Required at an Annual Population Increase of 70,168* (1930–1938) |
|---|---|---|
| 12 | 14.3 | 25.25 |
| 50 | 58.9 | 105.80 |
| 100 | 117.8 | 211.60 |

* The actual annual population increase for 1930–40 was noted below (n.17) as 44,981 persons. If that figure is used, the number of years required to absorb the vacant land in New York at 12, 50 and 100 families per acre will be 41.2, 171.8, and 343.5 respectively.

Continuing Sir Raymond says:

"If then the increase of population in New York maintains its present rate and if it be housed at the density now proposed for a certain housing scheme, the majority of the owners of vacant land within the city must wait 100 years and many of them 200 years before they will realize any value from use of the site for building purposes. If these facts are even approximately true and if present views on prices and densities continue, the conclusion seems to follow that the majority of this land has no real value whatever today and is unlikely to have any for generations to come!

"Meantime the owners, on the strength of a gamble with odds of 100 or 200 to 1 against their sites being selected, are holding up their land prices which compel those very high densities which in turn increase the odds against them! By reducing the density to 50 dwellings to the acre the odds would be halved; by reducing it to 12, they would approach the kind of odds which gamblers are willing to face on the race course. To say that if present methods continue such land is really worthless, is indeed an understatement; for it is saddled with considerable yearly liability for taxes."

Sir Raymond then turned to the general situation in regard to density:

"If two-story houses be taken to occupy 48 square yards of ground, and apartments 90 square yards; if, further an allowance for roads and public access paths be made of 54 square yards per house and 66 for each ground floor flat, irrespective of the number of stories, Table XXII will give the amount of free land per family which is available for purposes of amenity and recreation.

"From this comparison of what is obtained at different densities, the contention that the return on land can be assessed at a fixed sum per family, regardless of the density, is surely as absurd as it would be to expect that the same price per acre or square foot for any given land can be expected or realized, whatever the density that may be fixed. Somewhere in between these two unreasonable extremes will lie the truth; this means that *reduced density may be relied upon to yield a higher total of value to the owners of land generally*, but a lower sum per square foot than the fortunate owners of a few plots might receive if all the available developments could by means of high density be concentrated on a small area. Consequently *low density must mean for the city a higher total of land value, and a more stable tax basis, whereas high density reduces the total land value and greatly increases the degree of uncertainty as to tax revenues.*" Italics are ours.

TABLE XXII. AMOUNT OF FREE LAND PER FAMILY FOR VARIOUS TYPES OF RESIDENTIAL OCCUPANCY

| No. to the Acre | No. of Stories | Free Land per Family (sq. yds) |
|---|---|---|
| Single-family houses | | |
| 12 | 2 | 300 |
| 20 | 2 | 140 |
| Apartments | | |
| 40 | 4 | 82 |
| 60 | 5 | 50 |
| 120 | 10 | 25 |
| 120 | 6 | 14.33 |

A lower density, as is pointed out, (a) would profit the whole body of land owners and the city because of the more rapid redemption of the blighted areas, (b) would profit the occupants through a more open setting, even though lesser density might add slightly to the rent (elsewhere he figures that in England the decrease in rent due to increasing density from 24 to 12 per acre would add about 10 to 12 cents per month to rent, accompanied by a loss of $\frac{2}{3}$ of the space for garden and recreation), (c) would profit the owner through the reduced costs of development and through the modest increase in rent, which Sir Raymond held to be important "at a time when the total available increase in population is rapidly diminishing and, unless some change takes place, will at no very distant date come to an end."

All this does not mean that intensity of land use should be uniform throughout the city. Increase in intensity of use naturally allows a concentration of

activities in whatever localities. The concentration of urban activities in the center of the city, or in subcenters, is due to perfectly natural causes—the desire of those in many branches of business to be in close contact with one another, the obvious advantages of locating large stores, banks, and theaters near the center of population, and the need or desire of some to reside near their place of work or near the centers of urban activities. From a functional point of view, intensity of use becomes excessive when it causes congestion, notably of traffic. From the point of view of municipal finance, through the operation of taxation on real property, it becomes excessive when it leads to the concentration of land values in a small proportion of the total area of the city, preventing a reasonable spread over a much larger area.

Two factors, namely improved means of transportation facilities and the decline in the rate of population increase, should make it evident that overintensive use of central land, with its consequent excessive price, no longer has any justification and that not only should the tendency be arrested, but the high assessment of central properties should be reduced to a level justified by earnings, and also that, so far as earnings justify it, assessments should be increased on other properties. Methods of checking wide-spread obsolescence and of restoring blighted areas are discussed in the chapter on rehabilitation. The stabilization thus effected should make possible an increase in the total of urban values in the manner indicated by Sir Raymond.

Reverting to the data on density, the experience of Mr. Jacob Crane indicates that, in this country, doubling the density reduces the rent by from 2 to 6 per cent, that the "optimum density, all things considered, ranges from 10 to 25 families per *net* acre of building land," that for "low-income housing the first cost of land, as charged to the project, should generally not exceed 50 cents per square foot, ready-for-use; the normal range lies between 10 and 30 cents."[39]

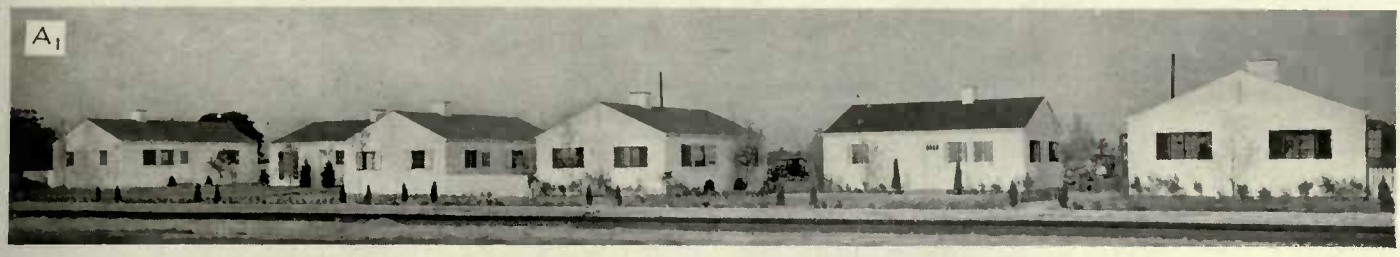
The legislation needed for better control of land use in total metropolitan areas is discussed in the chapter on the Rehabilitation of Blighted Areas.

### Resumé of all Costs

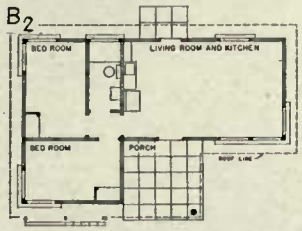
Let us now review the possible economies which we may expect in all the foregoing groups of factors. Of the items of cost that come through *management* in large-scale operations, we do not see any likelihood of further economies—except that they may be extended to a larger group, through mutual ownership. We see no signs of any marked economies in public housing through changes in the rates of *taxes and local contributions*. We do, however, see some prospect of effecting economies in the *cost of construction*, through greater efficiency in nearly all branches of the industry and especially through new materials and techniques for fabricating and for assembling them. Economies in construction would be felt equally in the field of private and of public ownership and would be reflected in the debt service. In public housing we probably cannot look for any appreciable reduction in the basic rates of the *debt service*; but in individually owned homes and in mutual projects there is room for more favorable rates. In the field of *design* we feel there is the promise of numerous economies through the trend for simpler designs, as well as in advances in various type of prefabrication and sooner or later of new materials and equipment. In the aggregate we see the possibility of a very appreciable reduction in the cost of various types of housing—the full realization of which depends in part on a coöperative spirit on the parts of labor and industry, but fundamentally on enlightened economic and social planning in the post war period, to produce continuous employment.

[39] Land, Materials, and Labor, *op. cit.* p. 1.

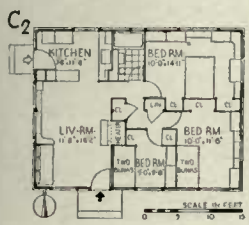
# PLATE XLI. SMALL HOUSES CONSTRUCTED OF PRE-FABRICATED PARTS—1936–1940

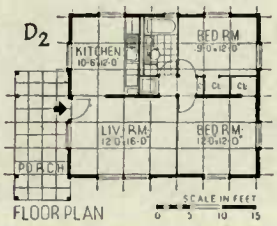




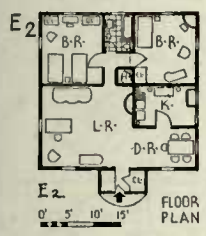















A. 1936. Gunnison Magic-homes, Inc., Louisville, Kentucky. Plywood panels, standard joists and rafters. Forced hot air heat. Cost $3.33 per square foot. Arch'ts, Weschmeyer, Arrosmith, and Elswick.

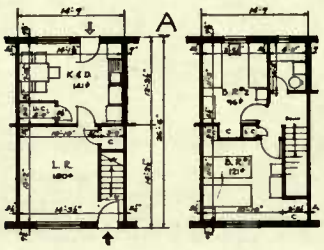
B. 1938. Fort Wayne Housing Authority, Indiana. Walls, partitions, and roofs of plywood box-panels, foundations reinforced concrete mat, gas-fired space heater. Cost, with WPA "relief" labor, $2.80 per sq. ft.

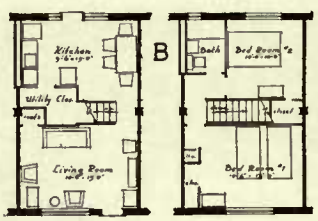
C. 1940. Pierce Foundation Experiment House #2. Plywood panels, standard joists and rafters, built-in furniture, circulated hot air generated by coal grate. Cost $3.30 per sq. ft.

D. 1939. Celotex Corporation, Plainfield, N. J. Celotex products on standard joists and rafters. Oil burning hot air heat. Cost $3.46 per sq. ft. Arch't. W. C. Douglas.

E. Hobart Welded-Steel House, Troy, N. Y., Concrete floors, all other construction and finish of steel, walls and partitions of hollowed welded panels. Stoker-fired hot air heater. Cost $3.66 per sq. ft. Arch't. W. G. Ward.

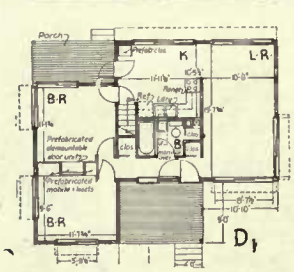
# PLATE XLII. TYPES OF FAMILY UNIT DESIGNS



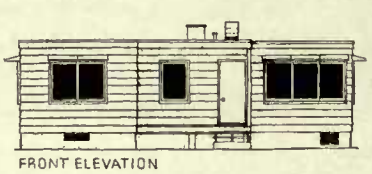


$C_1$

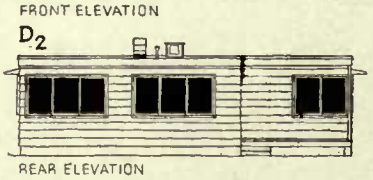




E. Plan by the author based on lowering ceiling heights to 7″–6″, and expanding floor area without increasing the cubic contents, which are the same as the 4½ room units in $B_2$. Plate IX with ceiling heights of 7′–10″. Note, (a) washroom, space for ironing and folding racks for drying laundry, for which the balcony also is available; (b) In $B_1$, space for crib and sewing machine; (c) In $B_2$, floor space gained by use of double-deck beds. Space for rear passage on ground floor could be taken from K. and B. R. Z. of units next to passage.

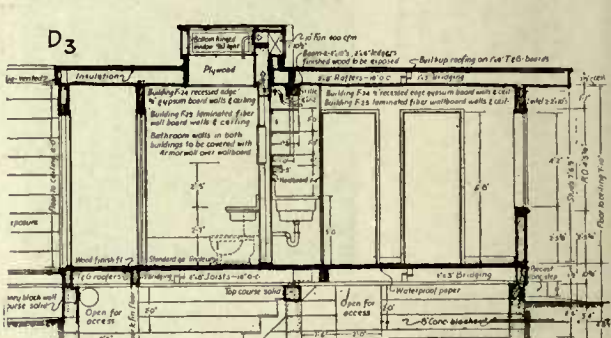

A. 1937. USHA type lan TA-4. Compare with B and C. B. Row-house unit in Elm Naven. *See Plate IX.* C. 1944. Aluminum City Terrace, War Housing, Pittsburgh. Arch'ts. W. Gropius and M. Breauer. $C_2$. Note trellis awnings for both floors, each casting an unbroken shadow; also privacy of terraces. D. 1941. War housing, Bethlehem, Pennsylvania. Arch't. R. Antonin. Note interior bath room.

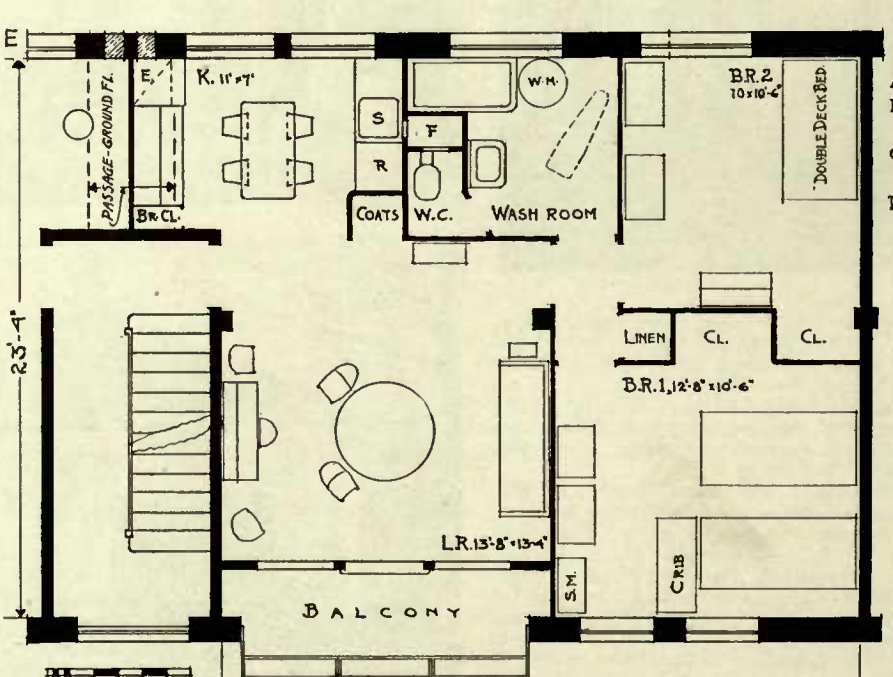



$D_2$

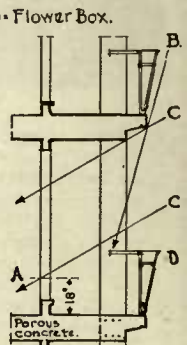



$D_3$




A-Glass Line.
B-Angle of Light in Summer solstice.
C-Angle of Light in winter solstice.
D-Flower Box.




E-Vegetable Closet over refrigerator.
F-Vent & Pipe Duct.
WM-Washing Machine.
SM-Sewing Machine.

## SECTION IV. THE DESIGN OF LOW-COST HOUSING

What are the objectives for which publicly aided housing is designed? Just what do we mean by "Design"? To what extent is the design of publicly aided housing affected by public policy? In the housing aided by the several federal housing agencies is the effect of differing policies apparent? Among these policies are there any which might be changed to the advantage of post-war housing? These questions and some others we shall discuss in this section.

### What Is Design?

Design is the art of adjusting various related parts into a harmonious whole. It is an art rather than a science because such an adjustment calls for judgment as to the relative importance of the several elements or parts which make up the design, judgment as to factors which may limit or determine the character of the design, and because these judgments call for creative imagination rather than inevitable scientific conclusions. True, science plays an important part in establishing the facts or factors to be weighed, it also plays a part in the process of weighing these factors, and in finding the technical means for attaining the design, just as in the art of medicine, science aids the physician in his judgments and the surgeon in his technique; but individual judgment and individual skill determine the results.

In discussing land planning, the late Sir Raymond Unwin said that he ". . . used the word 'design' in preference to the word 'plan' partly because urban development involves conception in three dimensions, which fact needs special emphasis, while the word 'plan' suggests merely the flat pattern on paper; and partly because in recent years the word 'planning' has been commonly used to cover the intellectual work of forming programs or policies: of evolving a planned order for economic and social life. . . . The purpose of land planning or design, which is to create a harmonious environment for the planned order of society, upon and out of the physical world of the land." Sir Raymond continues to the effect that though it may need less of abstract intellectual endowment, it calls for more of the qualities which we term artistic—the ability to visualize new physical relations and to bring them into being. . . . "The essential faculty of design consists in the ability to create new values arising directly from the relations in which existing things are placed and the proportions in which they are combined. These values are not inherent in the parts themselves but are due solely to their relations; they may be of various kinds; they may be values of use or convenience, of comfort, pleasure, or beauty." He emphasizes the fact that these various values all spring from a like source; namely, appropriate relations, but that this affords no ground for confusing them: "for use is not beauty, though both may result from good design. Nevertheless, the fact that these values all spring from harmonious relations does suggest that there need be no conflict between them, and that the good designer will embrace them all in his conception and be able to satisfy them all in his complete design."[1]

Every design has some specific objective. If the objective of publicly aided housing is the creation of a wholesome family environment, such as may be expected to contribute in a large way to good citizenship, then to accomplish that expectation fully, housing must be something more than the minimum required for sanitation; it must be such as makes possible efficient housekeeping, wholesome family life, and wholesome neighborhood life.

The design of housing projects has been commonly considered under two headings, *the site*, and *the buildings*. But neither can be considered independently of the other—no more than either can be considered independently of the characteristics of the population to be housed, the climate and the cost. The type of buildings, their height, spacing and orientation, the arrangement of each unit and of combinations of units, all are influenced by the site, and the proper use of the site is influenced by the factors inherent in the buildings. While all factors must be woven into one pattern, each factor must be analyzed and weighed to determine both its requirements and limitations and the extent of its flexibility.

In practically all design, among the factors which must be weighed and adjusted there is the factor of cost—the total cost of all items and the relative cost of each item. First comes the selection of the site, last comes the equipment of buildings and grounds, with an almost endless list of items between. Since there is a legal cost limit on all types of publicly aided housing, the crux of the problem of the design of such housing is to determine, among all the things which might be desired, which can be supplied—to strike a nice balance among all the things desired, and the things to be had within the budget limit; to determine what proportion of the budget shall go for land, so that there shall be sufficient for an open spacing of buildings, for playgrounds and for landscaping—the choice between the inlying location and the outlying; what proportion shall go into the volume of buildings, sufficient for rooms of adequate size; what proportion shall go into construction and finish of buildings, so that they will require a minimum of maintenance; what proportion into an efficient plan for conveniences and amenities, so that the period of usefulness may be extended, the period of obsolescence postponed.

The starting point of design is the preparation

[1] "Urban Development, The Pattern and the Background." By Sir Raymond Unwin. A Paper read before the British Town Planning Institute, July 12, 1935. Journal, Vol. 1, No. 3, Am. City Planning Institute, Cambridge 1935. (Now the Am. Planning Inst., M.I.T. #77, Massachusetts Ave., Cambridge 39, Mass.)

of a program outlining the things desired and their relative desirability. Such a program should, to some extent, be tentative, since the relative desirability for various items may depend on their relative costs, and costs vary from time to time, the cost sometimes rising for one item at the same time that it falls for another. But underlying the program under all conditions, is the assumption of a knowledge of what factors are essential to a wholesome environment. In its broader aspects this knowledge is derived from research into the nation-wide aspects of all the physical, physiological and social factors. In its local aspects, the knowledge of the facts is derived from an intensive local survey—getting at all the facts relating to the population and the land, and all other local conditions.

The most authoritative research which has as yet been made of housing standards is that of the American Public Health Association, as stated in "Healthful Housing." This document also suggests methods of attainment, as does a report issued by NAHO (*see p. 172*). This research does not, however, go into the question of relative desirabilities, of the compromises which must be made in striking a balance within the housing budget. The answers to these questions are found at three levels: (a) at Washington, in the determination of broad policies—for housing done with federal aid, the maximum costs per room, maximum and minimum family incomes for which government housing shall be eligible and the proportion of these incomes to be allocated for rent; also the period of amortization, which affects the type and cost of construction; (b) by the local authority, in the determination of the population to be housed and of the type of site, whether near or remote from the center, and this choice affects the density and the type of housing—whether row housing or apartments, etc.; (c) by the site planner and architect who prepare studies showing the alternate possibilities of the use of the land, the disposition of buildings of various types, and various types of construction. Obviously, for the best results, there must be team work and close coöperation among all these groups.

It is the architect to whom is finally assigned the task of assembling, analyzing, of weighing and reconciling all the aims, requirements, and limitations. The more the limitation that binds him, the less chance will there be for a free play of ingenuity and invention, of creative imagination in the solution of the problem. It is of the utmost importance that the higher authorities, as far as possible, state only the positive objectives, the broad essential requirements and limitations, and avoid prescribing the methods which are to be pursued. Too often the programmers have their own preconceived solution for the problem and so present a program that has but one solution. To some extent this has happened in the field of housing in the United States, as we shall point out.

## Design Characteristics of Housing Aided by Several Federal Agencies

The several federal housing agencies in the United States which have carried into effect the laws authorizing the public aids to the various types of low-income groups, have each been subject to different limitations, which at the outset limit the range of the designs; and each agency has issued supplementary detailed regulations by which the design has been further influenced. These various limitations have set a stamp on the designs for each of the several agencies. In some of these agencies there have been certain limitations which originate in the intent to make the housing program an implement for relieving unemployment, which fact must be borne in mind in appraising the resulting designs and, more important, in considering future programs and regulations, particularly in post-war days. A comparison of the characteristic designs resulting from the several programs is outlined in the following pages.

*Design Characteristics under FHA.*

Let us bear in mind that the purpose of FHA was to stimulate a supply of good dwellings for families whose incomes were such that they could not, under the traditional methods of financing and production, afford to rent or buy dwellings of a good standard, but who could do so under improved methods of financing. And FHA did reduce the cost of the housing by reducing the cost of financing, as we shall describe in some detail in Appendix A. As a condition of financial aid they required standards which were far in advance of the previous standards for the kinds of dwellings involved. To some extent by home-ownership, and by encouraging the planning of organized communities, civic coöperation on the part of the occupants has been engendered. But since neither the ownership nor the management was at any time in the hands of FHA, FHA has not had as large an influence on the setting and maintaining of community standards as it might otherwise have had and as has the USHA. This is reflected in the lack of community centers and community playgrounds in most FHA-aided projects, which point we shall discuss further a little later.

Since the housing was not owned or sponsored by town or city, the owner or developer was free to seek economical land in the rural or semi-rural areas. This has resulted in what is probably the most characteristic type of FHA design; that is, groups including from several score to several hundred individual houses, usually of wood frame construction, built by operators for quick sale to individual families at a cost of not over $6,000, the payments extending up to 25 years. Another similar type, but less prolific and probably less characteristic, was the type of housing costing up to $10,000 and even $20,000 on loans up to 20 years. The large multi-family projects do not seem to have contributed so much that is new or characteristic, though they have certainly improved the general standard.

As the payments, which were made in monthly installments to some local mortgage agency, were guaranteed by FHA (*see p. 228*), it was necessary that FHA take precautions against the property becoming outmoded within the period of the loan. To this end FHA set up standards for site development and for the design of the house. Aside from the documents embodying the definite requirement, there were others offering advice on the broad principles of land design and house design. It was required that plans for each house and project be approved by a local FHA office (usually one or more in each state), where they were reviewed by a site planner and an architect, who by their advice were often able to assist in materially improving the design submitted by the speculative builder. There were periodic inspections to insure conformity of the finished product with the design approved. A weakness of the system lay in the fact that often a poor design originating with the promoter had to be brought to an acceptable standard by tinkering—a process which cannot produce the best results. The net result, nevertheless, was a great step forward in the design of small houses and the planning of subdivisions.

Each house was required to have sufficient ground to assure a reasonable amount of sunlight, air and privacy. Land costs were kept low by the use of roads of widths no greater than required for the traffic of the block, and an inexpensive surfacing suitable to such traffic. The plan, at least in the outlying areas, was usually of the super-block type, with roads adjusted to the contours or other characteristics of the site. To insure a quiet residential character houses fronting on main highways were discouraged, either by the introduction of a secondary road roughly paralleling the main road, with a planted area between the two, or by making deeper lots in the strip of lots adjoining the highway and having the lots back upon the highway, with the drive approach on an interior street. In short, FHA succeeded in bringing into more general use the better standards long advocated by town planners, but not generally adopted by promoters. "Ideas which we had to fight bitterly for six years ago are now accepted without question."[2] Possibly in the post-war period FHA can go a little further in the $6000 class and do more to point out the advantages of having the garage of the small house continuous with the house—something which many owners would prefer, but which usually requires slightly wider lots than commonly offered. This would add much to livability and to appearance.

Because of its insurance of loans for periods of from 20 to 25 years, it was necessary that FHA take no chances on obsolescence due to architectural style or to construction. The prospective purchaser was often staking the best part of his life savings in his new house, and he too was not inclined to take a risk on new styles, new materials or new types of construction—for example he usually looked with suspicion on plywood or other wood or fibre board as substitutes for plaster. The promoter or operating builder in turn felt it necessary to adopt a style which would meet with the least sales resistance, and as he was trained in traditional methods of construction, traditional styles and methods, he too was conservative. So it happened that in each locality the styles of building which had there best stood the test of time were the ones usually adopted. In New England, throughout much of the East and in other regions with similar climate, the favorite prototype for the small house was the Cape Cod cottage, which, because of the low eaves, is easy to construct, fits well into the intimate scale of the small house and lot, and has a traditional, if not nostalgic, homelike quality. *See Plates XLIII, XLIV, pp. 200, 201.* While some prefabricated houses were built, they were, for the most part, fairly traditional in outward appearance. *See Plate XLI, p. 195.*

Lighter construction was permitted for these small houses when the rooms were mainly on the ground floor and the floor area of attic rooms did not exceed 50 per cent of the ground floor. Since in most regions the modernistic flat roof was taboo, for the reasons given in the foregoing paragraph, the inevitable result was a roof with high enough pitch to provide for one or two attic bedrooms and maybe a bathroom. Excellent precedent for such houses was found in the cottages in all the pre-revolutionary colonies—in New England, in the Dutch Colonies and in the South. So the construction standard contributed to an extension of these traditions—for better or for worse.

Thus in general this FHA housing has produced many pleasing pictures—groups of frame houses of design growing out of local traditions, placed in a well planned suburban setting. So it is today, with the houses harmonizing in color, according to a preconceived design, with the planting all a part of a general pattern. But unfortunately any individual owner in repainting his house may introduce the most inharmonious of colors, or may indulge in incongruous planting. The weakness lies in the lack of any requirement for continuing control, in the lack of an organized community of interests, to hold the advantages of the original plan and to progress from that point.

In some of these communities civic organizations have been established voluntarily; but such organization should not be left to chance. To obtain these results the promoters might be required to retain some financial interest in the projects for a specified period of time, or until there is a community organization satisfactory to FHA. Had this been done it might possibly have avoided some of the foreclosures of entire projects. (*See p. 229.*) With community organization, each individual property is a better investment and the properties in the aggregate are a

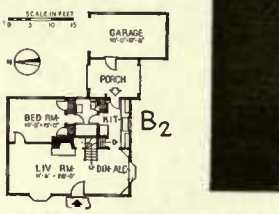
[2] "Neighborhood Planning" by Seward H. Mott, Director Land Planning Division, FHA in American Planning and Civic Annual, 1941. 901 Union Trust Building, Washington, D. C., pp. 347–52. Quotation p. 352.

# PLATE XLIII. FHA—INSURED AND OTHER SMALL HOUSES—NORTHERLY CLIMATES

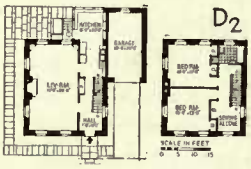
Note: For climates requiring continuous winter heat.





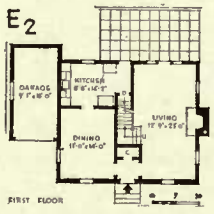







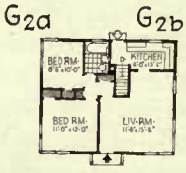



A. Bellingham, Wash. Forced hot air heat. Cost 18¢ per. cu. ft. Arch't. F C. Stanton. B. Ipswich, Mass. Oil burning steam heat. Cost $3900 @ 27¢ per cu. ft. Arch't. R. B. Wills. C. Tappan, N. Y. Walls and partitions of cinder-concrete blocks. Cost $4200. Steam heat. Arch't. F. H. Bissel. D. Somerton, Pa. Hot water heat. Cost 28¢ per cu. ft. Arch't. L. E. McAllister. E. Valley View, L. I. Built for sale. Brick in front only. Arch't. I. S. Chanin. F. Bonneville, Or. Three of the four types plans for executives of the Dam. Arch't. H. Johnson. G. Norwalk, Conn. Pressure hot water heat; Cost, including garage, $3950. Arch'ts. Evans, Moore, and Woodbridge. *See Plate XLVII.*







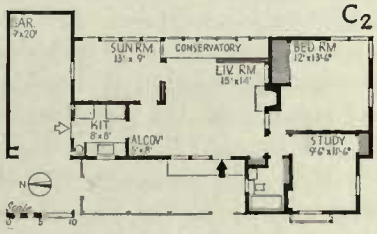



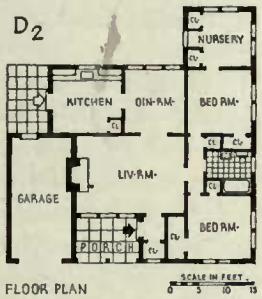


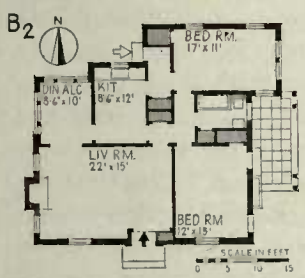

# PLATE XLIV. FHA—INSURED AND OTHER SMALL HOUSES—SOUTHERLY CLIMATE

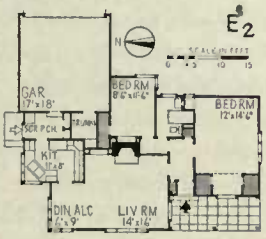
Note: For climates not requiring continuous winter heating.



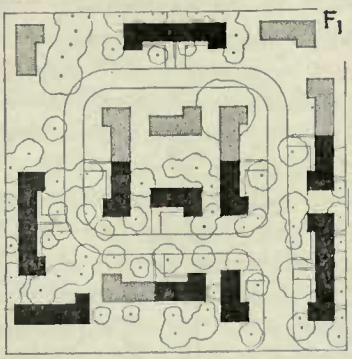


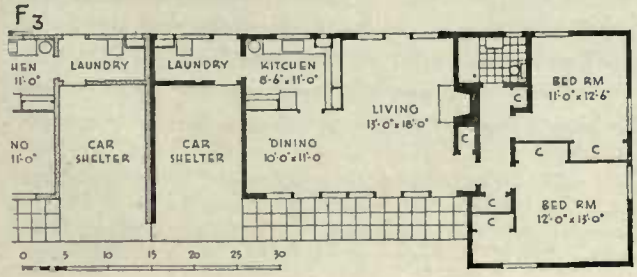



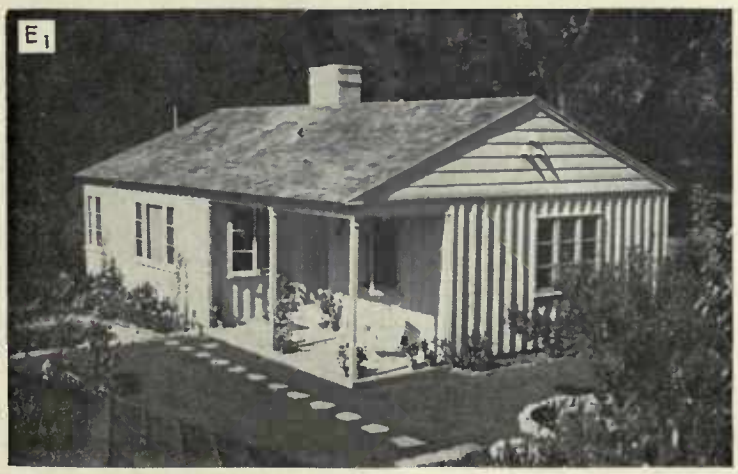

A. Austin, Texas. Brick veneer in local colonial tradition; detached garage, unit gas heater. Cost $4960 @ 22¢ per cu. ft. Arch't. H. F. Kuehne. B. San Antonio, Texas. Brick Veneer, wall heaters in bedrooms and bath. Cost $6680 @ 42.5¢ per cu. ft. Arch'ts. A. B. and R. M. Ayers. . C. Houston, Texas. Wall heaters. Cost $3500 @ 35¢ per cu. ft. Arch'ts. T. Wilson and J. Norris. D. Tulsa, Okla. Brick veneer. Floor furnace. Cost (ex. garage) $3980 @ 24¢ per cu. ft. Arch't. L. E. Schroeder. E. Santa Barbara, California. Gas-fired warm air heat. Cost $4472 @ 41.5¢. Arch't. W. Soule and J. C. Murphy. F. Hamilton Field, Marin Co., California. Wall 8 in. concrete blocks, painted outside. Arch't. L. R. Confer. Landscape by H. S. Rucker. Note rectilian plan without monotony.

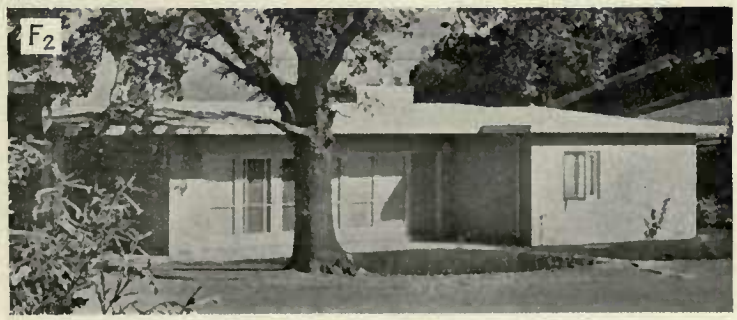








better risk for FHA and for both mortgagees and the mortgagors. More important than that is the actual improved sense of civic responsibility of those within these communities.

*Design Characteristics Under USHA.*

In practice the requirements for USHA were more exacting than those of FHA, for several reasons. Since its purpose was the positive end of a slum clearance and replacement program, the composition of the population could be almost a known quantity before plans were made. In all cases the tenants had incomes insufficient to pay the economic rent for their homes; consequently these homes could be no better than the minimum that wholesome living required; also it usually could be assumed with safety that the demand for the housing would be greater than the supply. The very 60 years term of the amortization made it necessary to build more durable buildings than under the much shorter loans of FHA. Moreover, USHA projects are under the continuous ownership and management of public authorities and not subject to any speculative operations, such as can result from change of ownership or management. Because of the lower incomes of tenants it has been assumed that they should be kept closer to cheap transportation and should not be party to the depopulating of the city itself, which migration to the suburbs often implies; they could therefore not usually be located on the cheaper suburban land—so the typical USHA housing is usually of masonry and definitely urban.

While USHA had a fairly clear program, there were, however, two major handicaps in the design not shared to the same extent by FHA: the preoccupation with low cost combined with long use (explicit in the law), and the intent to make housing take up the maximum of unemployment (also explicit in the law). The PWA housing, which preceded that of the USHA, had come in for considerable criticism on the ground that it was too good for subsidized housing, and that this brought it into competition with housing by private enterprise. The USHA in turn, to avoid housing that might be thought too good, seemed to lean over backward in the direction of low cost. Then, too, as a corollary to reemployment of those in the building trades, the law required that the basis of compensation should be that prevailing in the locality. This the USHA interpreted to mean acceptance of the current practices and wage scales of the trade unions. These conditions of reemployment inevitably implied, as the general procedure, following traditional methods of construction. While labor, on the whole, showed a good spirit in making certain concessions (discussed in the chapter on the Cost of Building), USHA was not entirely free to search for new methods—particularly when such methods would reduce the work of some building trades. The resulting traditional methods encouraged traditional design.

To establish standards of design, the USHA issued a series of bulletins and checking lists,[3] a book on planning the site and another on unit plans. In the bulletin and checking lists, minimum standards are established for areas of rooms and for the total family unit, for heights of ceilings, for window openings, for sanitary and heating facilities, etc., also for elements of the building common to more than one family unit such as halls and stairways, and for items like the development of the grounds. The several documents discuss in detail all the elements of the plan and of construction, pointing out methods of economy but emphasizing that the methods advised were suggestive rather than mandatory. As a whole, the documents form an excellent outline for low-cost larger scale housing. But not all the architects chosen by local authorities were trained in that research procedure which is essential to the solving of any new problem. For this reason, we assume, the USHA technicians felt called upon to go into greater detail than they might otherwise have deemed desirable—for such details tend to limit and to dull the imagination and to discourage research.

Haste also was a handicap—and we dwell on the handicaps in the hope that they may be avoided in the post-war period. Before the local authority could be assured of a loan from USHA it was necessary to submit a tentative or preliminary design of the project, for approval by USHA. The time taken for reviewing this design was often long. Meantime the local authority did not feel warranted in directing its architect to proceed with the development of his studies—thus causing him to lose valuable time in studying his problem. After the approval of the preliminary design came the preparation of the final design, working drawings and specifications, for which USHA approval was also necessary. If these were not approved, and if extensive revisions were required, there would be another delay. The architect was impressed with the necessity for speed in order to take up the slack in unemployment. The result was that there was a quite general tendency on the part of the architect to play safe and follow the specific suggestions in the bulletins—in short, because of this, the architects for many projects made little research for new solutions, either in plan or in construction. Projects in the south differ from those in the north, yet within these two regions there was a great sameness in the general design used in the solutions of the problems. On this regional difference we shall comment further a little later. The outstandingly good designs were the work of architects who showed executive independence as well as ability as designers—men of "guts and backbone" as well as brains and imagination.

There was another handicap to good design. We have already pointed out that a design is a finely

[3] The Bulletins were in the series entitled "Policy and Procedure." The Checking Lists were issued by the Technical Division and were a more concise statement of the content of certain of the bulletins.

balanced adjustment of many factors, in which each factor must be carefully weighed, and compromises must be made in many of the factors. This whole process, while it necessarily begins with an analysis, is essentially a synthetic process, in which a constructive imagination must clearly see the total net result. But when such a design was submitted to USHA for review, the process was reversed. Many technicians, each in his own field, scrutinized the plans for ways of attaining economies, and their recommendations were apt to be as to specific details, not the general design. Obviously by such a process the complete balance of a design might be upset, and often was.

The result very generally has been designs in which the economies bear the stamp of parsimony, in which standardization results in monotony, in designs which are devoid of that certain vital quality of atmosphere which can be had only by a balance of proportion in mass, line, texture and color. Such a balance is the product of an imagination trained to see in three dimensions and while it can be achieved without increased cost and without compromise of any essential, all can be thrown out of balance or adjustment by deducting or adding a little here, a little there. "The typical rigid uniformity of our modern projects is not only a matter of architectural poverty or failure to relate them to site and city. It does violence to the human content, for the people in them are not all alike, don't all do the same thing. Essentially, planning a large scale project offers this opportunity of reflecting both the group as a whole and the sense of inviolacy of the individual within that group."[4] This goal might be attained by setting a standard based on Spartan simplicity, but tempered by Athenian appreciation of the fundamental value of aesthetic amenities.

Some projects, otherwise well designed, suffer from lack of trees. Trees and shrubs have been planted, but the trees are mere spindles, which will not become effective for many years. Meantime, because of their small size, they are subject to many hazards, particularly near the playgrounds, and may require several replacements. Certainly they will require special care, as will the shrubbery. A few large trees judiciously placed and a minimum of shrubbery would involve little or no more initial expense, would become effective immediately and would reduce maintenance costs.

This common fault of uniformity and lack of local color could have been greatly reduced by two procedures: (a) recommendations for changes in design might have cleared through a skilled and experienced designer, who after careful study of the effect of the suggestions, might have conferred with the designing architect as to the validity of suggested changes; (b) instead of reviews and decisions being made in Washington, there might have been regional boards with which the local authority, and particularly the architect, could have kept in close touch. This is now, in theory at least, the procedure under FPHA, and we are confident will result in better designs. For those designs which are dreary there are, however, other causes, which we shall discuss a little further on and offer constructive suggestions.

The projects in the south very generally were of better design than projects of comparable type in the north, where not infrequently they were unhomelike and monotonous. The reason is simple. In the south porches are a necessity, as is a generous space between ceilings and roof. The cost of porch and increased roof space is far less than the combination of heating plant, deeper foundations, insulation, and other factors, necessary in the north; also land and building costs are lower, and building codes less exacting—rigid economy was less in evidence. So we have buildings with either a flat roof and a generous wall space between it and the window heads, or a visible roof. Thus there is a definite finish to the top of the house. Also we have roofs at different levels. All of these things make for variety in the disposition of the buildings, and for an air of greater domesticity. Presently we shall discuss the effect of some of the more detailed regulations on these and other factors of the design, with constructive suggestions.

*Design Characteristics in Defense Housing*

Conditions which made special defense housing necessary moved fast. There were many immediate requirements that did not fit into the requirements of permanent housing. Much of the housing was at a distance from existing populations; shelter had to be completed in the minimum of time; the war industry had priorities on materials normal to building construction, a condition which made it necessary to design in terms of a limited list of materials; in many groups to be housed there was an abnormal proportion of men without wives, requiring dormitories. The program took on largely the characteristics of temporary army camps. Such housing has seemed to many housers like an appalling loss of opportunity. Fortunately there is more to be salvaged from such housing than from many other undertakings essential to winning the war—essential to the survival of a civilization in which good housing may have a place. A certain amount of lost housing effort has been inevitable. It has been assumed that, temporarily, industrial workers could endure some hardships—small compared to those of the troops at the front.

The very fact that it was necessary to create a new type of housing, often in areas where housing authorities did not exist, called for new solutions, brought most of the existing housing agencies and many new minds into the field, and all minds, new and old, were quickened by the urgency of the situation. It may be said that in general the existing agencies to whom work was consigned functioned in this typical manner, but it is too early to appraise this housing

[4] Albert Meyer, in "Why Dreary Housing Projects?", in Graphic Survey, Feb. 1942. 112 E. 19th St., New York City.

fully. There may have been fumbling early in the game, and some bad judgments as to location and as to permanency, but despite all this, defense housing has already made some worthwhile contributions to housing experience and design. A few examples: It demonstrated the effectiveness of local housing authorities by the fact that through their agency (in localities where they existed) and through the service of local architects, the housing delegated to USHA by the Defense Coördinator was handled more expeditiously, efficiently and with greater economies than was the housing delegated to FWA—designed and handled through a central agency in Washington. When, in turn, this FWA designing was transferred from the Washington bureau to the offices of carefully selected architects in private practice, a quality of design was produced superior, in our judgment, to comparable designs produced by local authorities under USHA (*See Plates XIII, XIV, pp. 44, 45*).

*Design Under FSA.*

The Farm Security Administration is the other agency which has been producing housing in normal times. As we elsewhere outline its work in some detail (*p. 238*), it will suffice here to say that the defense and war program called for stepping up their previous provisions for migrant agricultural workers and their families. These migrant workers come from varying backgrounds of race, traditions, habits and climates and move about from place to place, often to localities new to many or most of them. Obviously it is not feasible to get from them much valid opinion as to the needs of these camps. FSA had of necessity to proceed on its own analysis of the problem, with a traditional scientific approach, but without the limitations of the obsolete building codes which have prevailed in urban areas. Other types of FSA design are described in our previous account of FSA. It will probably be generally agreed that FSA has made more advances in building design than the other housing agencies. To meet highly specialized situations it produced some truly functional designs. *Plates XLV, XLVI, pp. 205, 206.*

*Design Under TVA.*

TVA, while not national, is a region so large (approximately the size of New England) that it has been possible to do some independent research into housing design, at least in a limited field. Because of the mild winters and the availability of electricity at low rates, this research has been chiefly in the field of electric heating and the special insulation involved. Its findings, however, are of value in colder climates also. Many of the houses are a good demonstration of the simplicity which results when Economy can be happily wedded to Beauty, provided Economy is not impersonated by Parsimony—if he is, there will be no marriage or else a quick divorce when his cloak becomes threadbare or the tinsel becomes tawdry. *See Plate XLVII, p. 207.*

Such are the broader characteristics of the designs resulting from the broader limitations set by the several national agencies engaged in housing. Some of the more detailed characteristics follow.

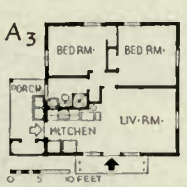
### Some Details of Policy and Advice Which Have Tended to Impede Good Design Under USHA

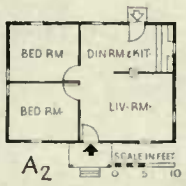
In addition to the handicaps to design brought about by certain limitations in the laws and by a speed-up for reemployment, there are handicaps within the departmental documents to which we have previously referred. These handicaps appear as advice on specific economies and methods, advice which flows as an undercurrent through the otherwise usually excellent documents issued by the USHA, and they deserve further scrutiny. The danger of categorical statements or over-emphasis of details, and the extent to which limitations and restrictions, though only implied (as these are), can interfere with creative thinking and the normal process of design, is indicated by the examples which follow.

"Planning the Site,"[5] replacing an earlier document issued in 1939 by PWA, is an excellent statement of the case. The only omissions which we note are: (a) references to orientation in relation to prevailing winds—the unfavorable winds of winter and the desirable breezes of summer; (b) references to the possibility of avoiding monotony by breaking the skyline—by taking advantage of broken topography or, on a flat site, by varying the height of the buildings; or by avoiding long stretches of straight roads, or by varying the set-back of the building line where straight roads seem to be required. These omissions may be one of the contributing factors to the monotony in many projects.

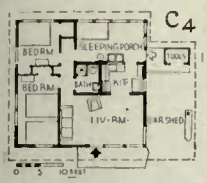
This excellent document, "Planning the Site," is preceded by a statement which in its dogmatic tone tends to neutralize the liberal tone of the body of the text. Accompanying the statement is a drawing of row houses or flats set well back from the street on a terrace about three and a half feet high, with a steep slope to the sidewalk, and steps up the slope. Four specific factors are criticized, followed by the unqualified statement, "The entire arrangement would be much improved by moving the buildings out to the sidewalk and pooling the space inside, where it is most useful." Undoubtedly that might be one way of improving the layout, and it might be the best in some situations, but not in all. If, for example, the street on which the houses front were narrow, congested with traffic, flanked by tall buildings on the opposite side, then a set back might be desirable. Even if the street were widened, some set-back might be desirable for privacy in the rooms on the first floor and for a screen of shade trees (a point stressed in the earlier PWA document, "Plan Units for Low-cost Housing"); if the floor

[5] "Planning the Site," in Series of the Design of Low-Cost Housing Projects, Department of the Interior, USHA, Nathan Straus, Administrator, May 1939.

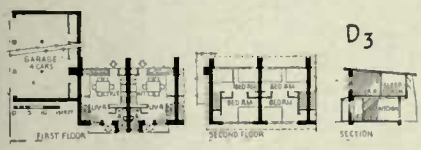







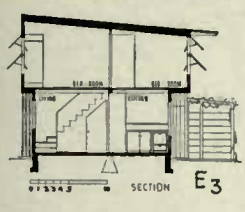


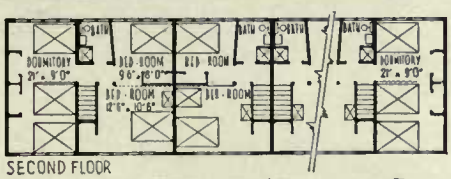


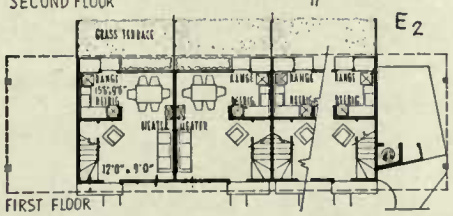




A. South and middlewest. Houses from lumber precut at portable mills.
A1. Old type farm house in center; new type at left. A2. Minimum shelter, cost $499. A3. Type "C" @ $750.
B. Casa Grande Valley, Cal. Adobe walls 18 inches thick, laundry equipment on porch. Cost about $2000, considerably more than wood frame houses.








C. Mineral King Ranch, Cal. Clerestory lighting for bath and kitchen makes square plan possible. The awning type sash in upper half and shutter in lower half permit generous ventilation even during rains.
D. Chandler Farms, Arizona. Row houses in adobe, which accounts for the heavy buttresses. Cost $2097, considerably more than wood frame construction. D1. Garden side. D2. Entrance side.
E. Yuba City, Cal. E1. Permanent row houses, wood frame. E3. Portable "migratory" section of camp. Trailers for health service; offices and quarters of manager.
F. Shafter, Cal. Migrant workers camp.
Note. For plans of B to F see next plate.



Note: Camps for permanent and migrant farm labor. *See preceeding plate for details.*

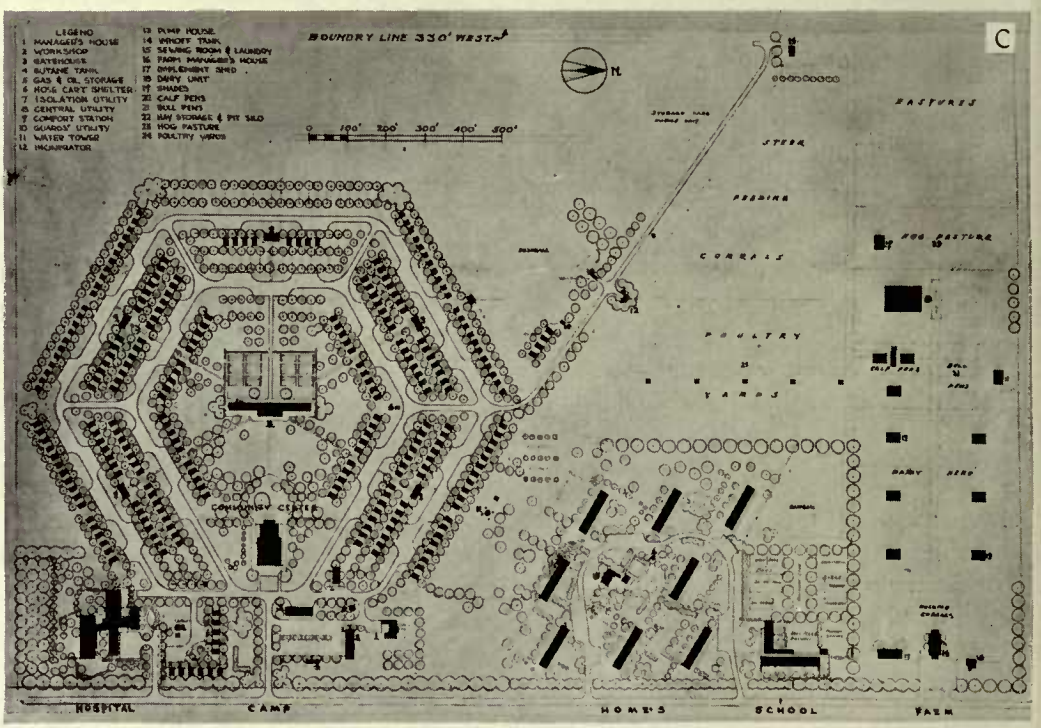
A. Firebaugh, Cal. 1. Row shelters, for six families each. 2. Central utility building, showers, laundry, drying yard. 5. Quarantine and isolation. 4. Clinic. 5. Bath house, warehouse, office. 6. Assembly hall. 7. Manager's house. 8. Six row houses. (apartments) 9. Homemaking and laundry building. 10. Farmland. 11. Farm group, dairy, etc. 12. Camp employees, watchmen, etc. Frame construction, exterior redwood, interior plywood and wall board.

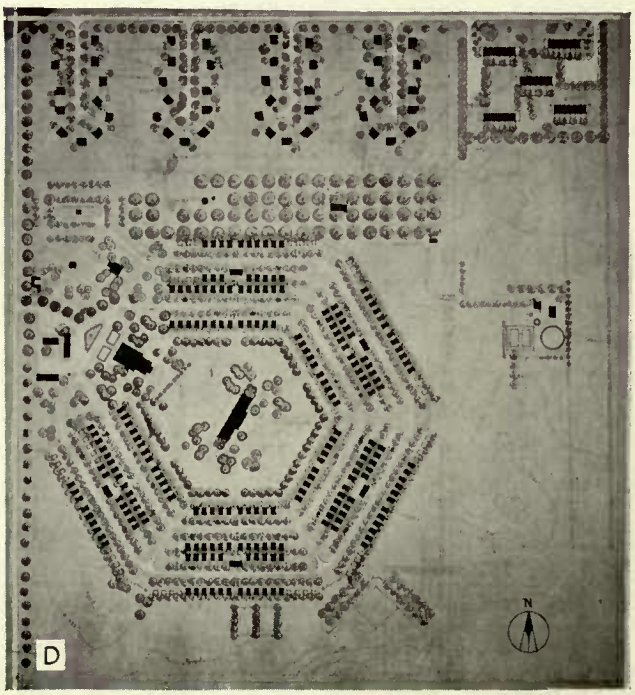
B. Yuba City, Cal. In foreground 84 permanent row houses for farm laborers in steady employment on nearby commercial farms; beyond this is the seasonal camp for 284 migrant families; the community facilities lie between the two.

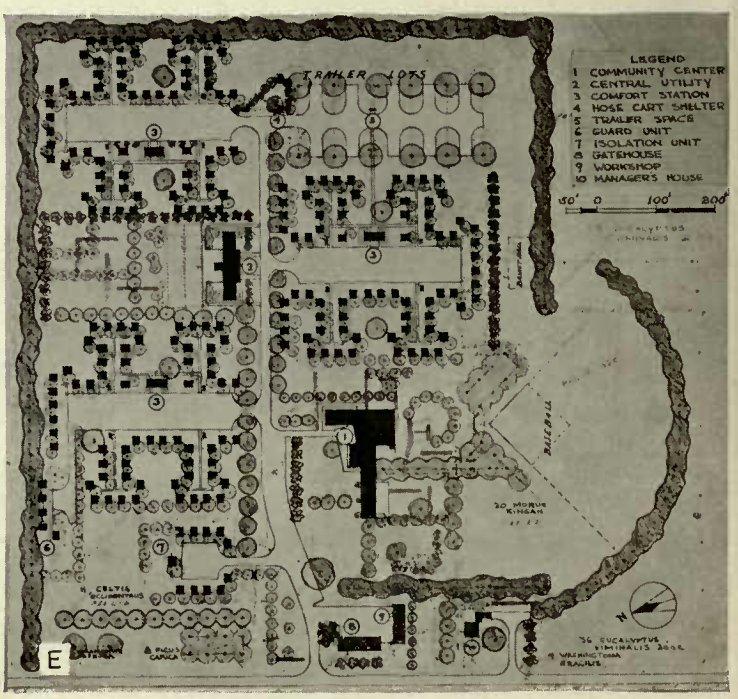
C. Eleven Mile Corner, Ariz. Geometrical plans are logical for flat terrain and large open spaces.

D. Tulare, Cal.

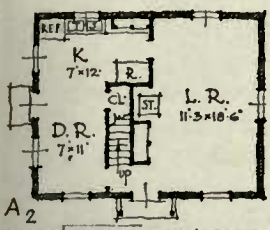
E. Harlingen, Texas.



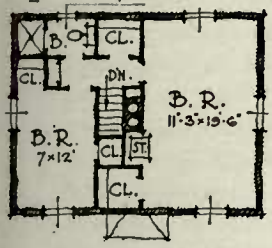



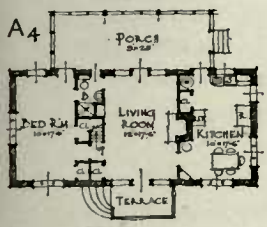
# PLATE XLVII. RURAL HOUSING 3. IN THE TVA, ERA, RA & USHA



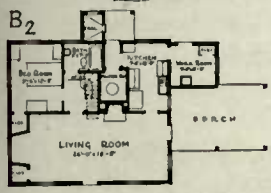

A2



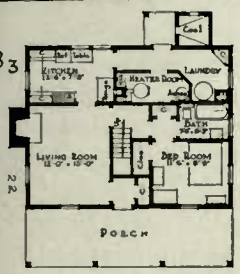

A4



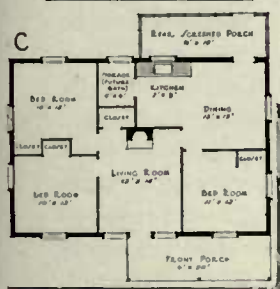

B2




B3




C




A1

A3

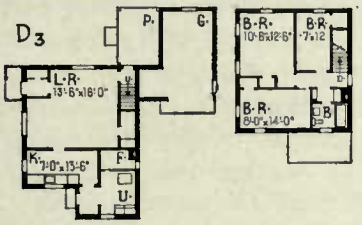
A5

B1

D1

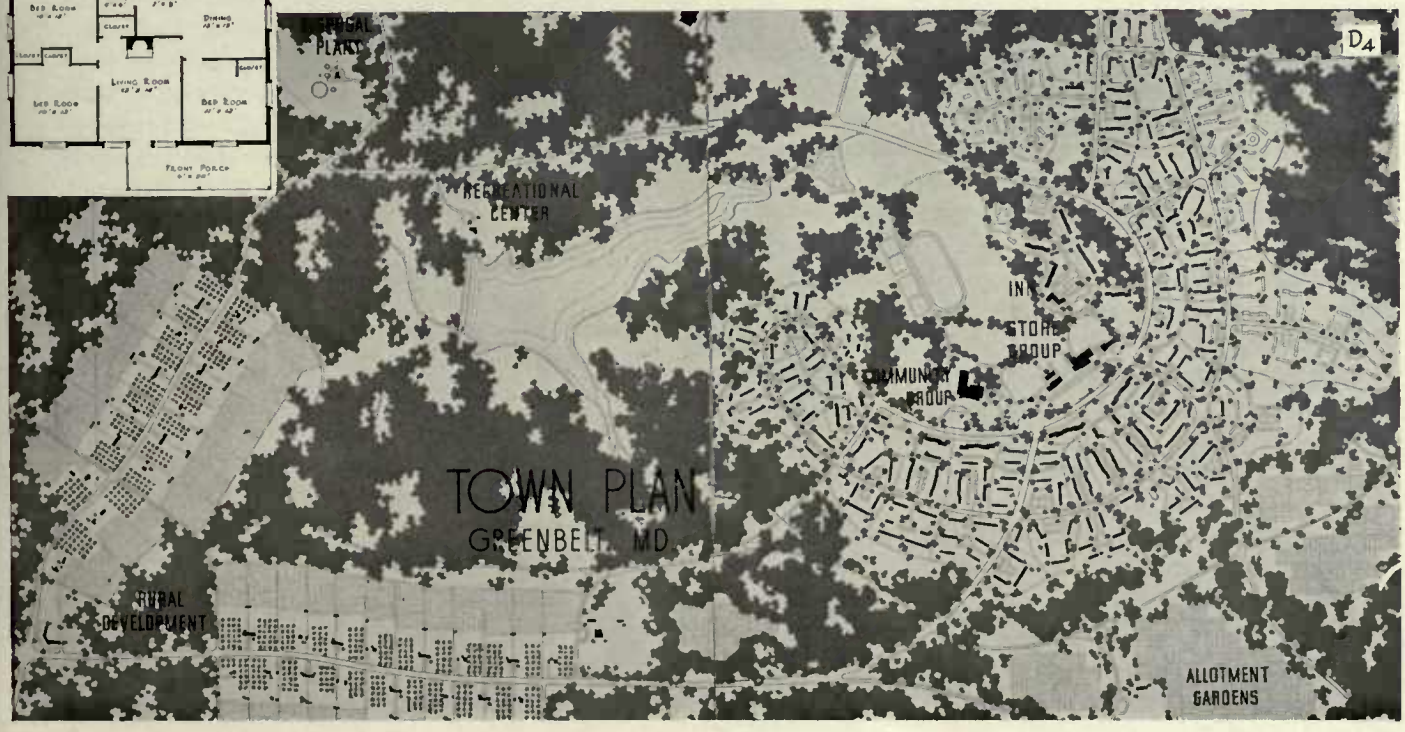
D2

D3




TVA—$A_1$, $A_2$, $A_5$. Cinder-blocks, whitewashed. $A_3$, $A_4$. Wood frame. Arch't. R. Wang.
ERA—B. Subsistence farm homes. $B_2$. Northern type. $B_3$. Southern type.
USHA—(rural) C. Type plan, showing space for future bathrooms. Annual rent $82.
RA—$D_2$, $_3$. Greendale, Wis. Simple houses. Monthly rent $5.91 per room. Arch'ts. H. H. Bently & W. G. Thomas. $D_4$. Greenbelt, Md. Site planner H. Walker, consultant E. Draper. *See also Plates XLIII, XLIV.*

D4



remained five feet above the sidewalk, approximately the level indicated and which the level of the ground at the rear of the building might make desirable, then some set-back would be necessary to allow space for the steps.

It is not necessary to point out other possible solutions; the point is that here a solution is suggested for a detail of site planning without relation to any complete plan—a method which is at variance with all principles of planning and with those recommended in the body of the report. It is mentioned because similar contradictory or restricting advice occurs repeatedly in the bulletins and in the checking lists. Such statements, in a document otherwise so excellent, suggest the cow which stands patiently while the farmer milks a full pail, then, by a flip of the hind leg, kicks it over.

In the "Checking List for Architectural Planning and Design" we find this: "The grouping of all units having the same over-all height will also lessen the possibility of wall cracks due to unequal settlement of buildings." It is an elementary principle of construction that all footings be proportioned to the allowable soil load, so that settlement in all parts of the building will be uniform, even if the loads do vary, a principle pointed out elsewhere in the checking list. The statement, however, seems to warn the designer to avoid a diversity of height, which in certain situations might be advantageous; it seems to discourage any but the easiest and most stereotyped solution. This too may account for some of the monotonous skylines.

In Bulletin 12 is another statement which, judging from results all over the country, seems to have discouraged that research and inventiveness on the part of the designer which is fundamental to progress: "Our studies seem to indicate that a building depth of approximately 26′–6″ permits a *livable* plan with an economical use of materials by means of continuous framing in one direction and *a* bearing wall or beam between the outer walls" (italics are ours), and, "In two-story units of frame construction, a placing of stairs parallel with the joists will avoid the introduction of long headers and permit of simple and economical framing," and then some of the resulting economies are given. From this concept results the typical arrangement shown in "Unit Plans,"[6] in which the stairs start opposite the front door, giving the living room greater depth than width, and making it necessary for the housewife, and all the family when using the rear door (commonly the one most used) to cross the living room to go upstairs, taking a traffic lane out of the length of the already not too wide living room—a "livable" plan, but certainly not one which is efficient for living. *See Plate XLIIA, p. 196.*

By ignoring the proffered solution and advice of the bulletin and using an extra cross beam, the stairs can be placed crosswise of the house, resulting in a wider living room, with stairs adjoining both kitchen and living room, saving many steps for the housewife and avoiding much traffic across the living room. Incidentally it results in shallower beams; which in turn cut down the height of the exterior wall (important, as the bulletin tells us), which are economies to be weighed against those of the stereotyped solution suggested; it also saves 10 per cent in floor area. The idea is not new to architects, but it seems to have been first introduced into USHA-aided housing by the architect for Elm Haven in 1939. *See Plate XLIIB, p. 196.* It reappeared in defense housing in 1941.

That the objections which we find in the documents we have been discussing could have been avoided is demonstrated by a document having the same objective, "Recommended Standards for Public Housing Projects," for the State of New York.[7]

*Some Changes Needed*

There are also other items of general policy which influence the goal of design and so of design tself, and which might well be scrutinized in advance of post-war activities, some of which pertain to private as well as to public housing.

One item of policy which has come in for criticism is that of permitting an extension of a living room or dining room (when of prescribed minimum size and when used for a dining space) to count as half a room, with no special requirements for outside light or ventilation. This has led in some projects to allocating for dining purposes a space which is little if any better than an interior passage, and without cross draft or adequate outside light. *See Plate XVB, p. 46.*

Another program which deserves more general attention is an intensive study of the population to be housed. Because families are not uniform in their composition and because few if any families are static (there are births, deaths, the maturing of children, the aging of parents) public housing projects must have a variety of unit plans to meet varying requirements. But a mere list of the names of rooms required in any dwelling unit is not adequate data for preparing efficient and economical plans. The age, sex, marital status of the members of the family all determine the type of unit any family should have. In a shifting tenantry it is not possible to know, as in a house designed for a given family, who will occupy the second and third bedrooms, whether little children, adolescents or grown-ups, nor whether it is the young bachelor uncle or the grandmother who will sleep on the living room couch. While not every possible combination can be planned for, it seems probable that there is room for more careful surveys to determine the varying

[6] "Unit Plans" Suggestions for interior arrangements of low-rent dwellings; United States Housing Authority, Department of the Interior, Washington, August, 1938.

[7] "Recommended Standards for Public Housing Projects," Bulletin No. 1, Division of Housing, State of New York Executive Department, Revised to Sept. 10, 1943. Previously issued as "Recommended Standards and Room Areas."

requirements, and that there is room for more flexible planning.

The aim in USHA-aided housing was, in theory at least, and quite rightly so, to attach most importance to providing for families with many children. But the aim was retarded by the fact that usually the more children, the greater the subsidy, which it was desired to keep low. On the other hand relatively little provision has been made for unmarried folk, and elderly couples. It may seem logical that these groups might be deferred to later projects. Against this point of view, however, is that of making each project as complete a cross-section of society as possible, as has been done to some extent in the District of Columbia, and as is common in Holland.

Also a greater recognition for specific population needs might result in building some units on a floor or two above the level prevailing in the project, for use of the relatively young unmarried folk and for young couples without children. For these groups, an extra flight up would not be objectionable. While in England suburban buildings have been kept lower than in the United States, the Ministry of Health has approved of four and five story walk-ups in intensively built-up areas. Elderly couples should of course be on the ground floor and, in some cases at least, provided with small gardens—again profiting by the Dutch example. Such innovations, because of the wider range in the sizes of family units, would give greater flexibility both for present and for future demands. At places a fourth or even a fifth story added to one of several buildings in a three story project would lower the average cost of building, and the childless younger people occupying them would require less subsidy (if any) and so reduce the average subsidy.

There is need for a more clear-cut understanding of the uses to which the various rooms are to be put. The very names used to designate the rooms in low-cost housing are misleading. We apply to these compact dwellings the same nomenclature used in the more spacious houses requiring one or several servants. The space known as the kitchen is often kitchen, dining room and occasional laundry and drying room, all telescoped into as little or less space than the kitchen of a spacious house. But these many functions are not reflected in the plan. There is seldom adequate provision for the daily washing, even of dish towels, which, unless special provision is made, fills the atmosphere with humidity. Not so many decades ago the term "living-room" was coined to designate a room serving as the parlor, sitting room and library of former days; in low-cost housing it frequently serves as "best room", sitting room, childrens' study, perhaps dining room and sleeping room, and for traffic way as well. "Bathroom" is an inadequate and misleading name for a room serving three distinct functions, some of which might well be separated. The "bedroom" however, is a fairly accurate name as things go, for the bed symbolizes the one use which, because of the restricted area, is usually possible; there is no space for the active life of occupants—the play or study by the children in a room of their own, or sewing by the mother in a room apart from the much occupied kitchen.

To correct these defects cloaked by terminology and misleading labels would, generally speaking, require somewhat larger floor areas within the unit itself. Following the occupancy of the first buildings built with USHA aid, there was issued a new schedule of minimum sizes of certain rooms, indicating increased areas—about $16\frac{2}{3}$ per cent in the kitchen, 10 per cent in the second bedroom, 25 per cent in the third bedroom, plus 20 per cent for storage space. These increases presumably indicated a need, which, when the projects were occupied, the managers found important. Such increase in room areas does not, of course, represent proportionate increases in the cost of the dwellings. The ground and its development, common spaces within the building, the utilities and equipment, the number of doors and windows, and so on would remain about the same. Certainly if these increases in area result in greater efficiency they will postpone the day of obsolescence of the entire investment, which is an important consideration.

But all items of cost, though each may be small, must be carefully weighed. As Mr. Shire has admirably put it:[8]

> "Every concept of livability or amenity in a dwelling which may be expressed in terms of a physical standard may also be expressed in terms of the cost of use. Cost of use is a factor of initial cost plus the cost of operation and maintenance over an estimated useful life. For example, every square foot of space which is added to a room to increase livability, or improve privacy, may be evaluated in terms of additional rent per room per month, both in carrying charges on the initial investment and costs of operation and maintenance.
>
> "Thus, the operation, maintenance, replacement and insurance costs become of paramount importance in the determination of rent . . . every increase of space or equipment beyond what is 'decent, safe and sanitary' will deprive some family now living in indecent, unsafe and insanitary housing of the benefits of the Act, and may also by virtue of increased cost of use, place an excessive burden on the families who are benefited. Accordingly, we have tried, within these limitations of (1) low rental costs, (2) low capital costs, and (3) durability, to define a minimum standard of livability and amenity."

The item of durability would logically include consideration of obsolescence. But on this specific point Mr. Shire's article does not comment. The fact that USHA recognizes that equipment, such as the plumbing fixtures may be expected to become obsolete before the buildings, places the emphasis on the need of having the structural parts of the buildings so planned that there can be changes in equipment and possibly other interior changes, without affecting the structure. But changes in fixtures are themselves costly, and the conditions which make such changes

[8] "Housing Standards and the USHA Program," by Albert C. Shire, Director of Technical Design, USHA. An address before the American Home Economic Association, Pittsburgh, June 1938, issued by the USHA.

desirable may also make desirable some space changes. In the light of several years of occupancy of many projects, and because of its bearing on obsolescence, a review of space uses seems in order.

## Standards for the Use and Measurement of Space

*The Preferences of Tenants*

In principle, the likes and dislikes of tenants might be expected to be a guide in planning for their living accommodations, and hence a guide for future changes. Certainly their preferences should be given careful consideration. But people whose experience in housekeeping has been limited to the made-over houses built for another type of living, or to congested apartments in substandard and only partially equipped tenements, bring with them a complex of habits and prejudices which hardly fits them to judge of what is best in new housing built to serve several generations. Children trained in domestic science in the public schools and accustomed to showers in the school gymnasium will bring in another point of view. Meantime what the parents at first had considered odd and unnatural may soon come to seem normal. When the fashion is for short skirts, long skirts seem ridiculous; when long ones are the fashion, short ones are shocking.

On some preferences, however, there seems to be agreement, both by many tenants and by managers. Thus when a project is designed for a specific population (as each project should be in so far as possible), racial or traditional habits and preferences which are not undesirable should be allowed for. *See our Changing Culture in chapter on Population, p. 121.* It is generally recognized that concrete floor construction covered with asphalt tile is objectionably noisy, often transmitting sounds from distant parts of the building, and the tile shows dust and footprints. It seems to be generally recognized that satisfactory laundry facilities have not yet been worked out in this country; the basement laundry is inconvenient (impractical when the housewife is ill); and washing in the kitchen is a sloppy and unsatisfactory process. The system of "wet laundering" (in which the washing is done at a steam laundry for a small sum and returned wet for ironing at home) may possibly hold some promise for the large family wash, but not for the small daily wash. Bedrooms too have little free space for day uses. Having to take the baby down several flights of stairs for an airing is an interruption and is burdensome. To have to go to the common grounds for a full view of the sky and full enjoyment of the summer breeze is unsatisfactory.[9,10] The living-room space should be large enough for a few guests to be added to the family circle.

*Suggestions for Specific Changes from USHA Standards*

The foregoing defects in design are for the most part the result of certain assumptions, which are explicit or implicit in the program. To eliminate them means to reconsider those assumptions. To consider a greater freedom of choice of materials and methods than was feasible in the past is not to indulge in crystal gazing. To do otherwise would be to proceed on the path ahead with our eyes looking only backward, over the path behind us. With the retooling of industry which is coming with the peace, it seems safe to assume, will come new materials and, because of lower prices and new methods of application, a liberation in the use of old materials. I here suggest for review two principal items which seem to hold promise: (a) Type of floor construction and finish, (b) Story heights. Secondary to these and related to them, to amenity, to flexibility and to amortization are two other items: (c) Sash, and (d) Partitions.

The floor problem might be solved by the use of a porous concrete slab, of such thickness as to allow of steel or dense concrete beams within the depth of the slab. This would greatly reduce the transmission of noises—the family walking overhead and the flushing of water closets, near or distant; the elimination of dropped beams would give greater flexibility to the location of partitions; lintels in the thickness of the slab would facilitate raising the window head to the full height of the ceiling. This latter would enable us to reduce the ceiling height without cutting down the depth to which light penetrates into the rooms, and would result in improved ventilation of the rooms. A lower ceiling height would make possible a larger floor area per person, still maintaining the standard of 400 cubic feet of air per person and the same cubic content of building.

The porous slab would also facilitate a better floor finish. The asphalt tile, the surface commonly used in USHA-aided projects has little resiliency, and shows foot marks, dust and the impress of heavy furniture; it is generally conceded it will not endure for the 60 year period of the project loans. The use of terrazzo would have the advantage of longer life and greater ease in cleaning and can be made homelike by the use of rugs, of vegetable fibre if necessary. When produced in large quantity, under specifications simpler than those ordinarily used (aggregate of medium size from the nearest marble quarry, a little less polishing, etc.) the cost need not be more than half the usual price of terrazzo. It is time-tested in southern European countries and I have used it with complete satisfaction throughout the sleeping and all other areas of a large working women's club (similar to a YWCA) and also on the first floor of a home of my own, in both of which buildings it is in excellent condition after 30 years of service. Should radiant heat become feasible

[9] Elizabeth Coit, in the *Architectural Record* of April 1942, p. 72–84, summarizes her studies on tenants' needs and designs, made under the Langley Scholarship (*op. cit.*), and suggests many possible improvements in planning.

[10] Leonard Wayman, in an article in Architectural Forum for April, 1942, p. 217–222, under the title "The Public Tenant Speaks," states his observations within the foregoing year on over a hundred projects.

in the near future, the thicker slabs would facilitate floor or ceiling radiation—our partitions are too thin to enclose the radiating pipes.

We in the United States have a weakness for machine finished products, such as surfaces which are mechanically smooth and even. This has very generally applied to plastered surfaces, with the exception, however, that in the more costly buildings an extra price is often paid for an effect of hand texture. The forms in which concrete floor slabs are poured leave a slightly irregular impress on the concrete (*see Frontispiece*). Too often this is plastered over at an extra expense, or every little irregularity is ground down with a silicon carbide block. There is no reason why this should not be done away with entirely, except that the plasterers' unions do not like the elimination of the plaster. The omission of plaster is an economy in both the first cost and in upkeep, particularly if in some future decades there should be need of changing the location of partitions.

The partitions of solid plaster on metal lath and studs which are in general use have some good qualities —rigidity, durability, without runways for vermin— but their erection is time-consuming and the wet plaster keeps the building humid for weeks, and so slows up the work and is harmful to the finished woodwork. A partition which could be erected dry, after the floors are finished, and fastened with special wedges or spring clips, would be a great advance. Then all the floors in one unit of building could be finished as one operation, and if later alterations required changes in location of partitions, patching the floor finish and ceiling would not be required. Manufacturers have produced in the laboratory partitions approximating these standards, but to market them would have meant abandoning existing machinery or plants. Since many plants have had to be retooled after the war, we may hope such new products will become available.

Another item of construction on which we can hope to see improvement is in metal casement sash. The chief advantage of the *traditional* casement sash is that the full area of the window can be opened in warm weather. In the sash now available at prices within the reach of low-cost housing, except for the very small sash, only about half the area is hinged— only half the potential area available for summer ventilation. This is most unsatisfactory because the lack of control of the summer climate in houses often makes the hot weather more of a menace than cold weather. It seems reasonable to hope that the sash industry, profiting by the war expansion in the production of aluminum, may now be able to supply at reduced prices an all-ventilating strong sash, made of some weather-resisting alloy, and requiring no paint.

Ceiling heights deserve more consideration than they have had. Local traditions and customs have largely determined what standards are acceptable. But it must be kept always in mind that a large part of the population with lowest incomes have been living in the left-over housing built for commodious living of another age; large rooms with ceilings proportionately high were subdivided into two or more rooms, with the same high ceiling. The original houses were built in the fashion which happened to prevail at the time. Thus accident rather than logical standards has established the prevailing preference about the height of ceilings. In colonial days, when buildings were built in a straightforward manner, without influence of fashions, ceiling heights responded to climatic conditions. In the north, where winters are long and cold and the hot spells of summer relatively short, ceilings were kept low and the windows relatively small; in the south, where winters are short and mild, summers long and hot, ceilings and windows were high. Today in those areas which are densely built up with tall buildings, as in New York, though in the north, the problem is again one of keeping cool in summer rather than of keeping warm in winter.

These traditions were lost sight of when eclecticism introduced exotic fashions in design. Beginning with the classic revival and extending through various Victorian influences to those of French chateaux and manor houses, ceilings were high, only to be reduced with the revival of the early Colonial and the introduction of the styles of the cottages of England, France and the Mediterranean. The first standards for tenement houses happened to be set in the period of high ceilings. Because reducing the height "reduced the cubage and the cost," and because fashions in building "cannot wisely be ignored,"[11] as late as 1914, in "A Model Housing Law," a minimum of 9 feet was recommended, to be reduced to 8 feet in 1920,—except that in attics (the hottest part of the house) the minimum might be 7 feet. State and local tenement codes all over the country very generally followed the recommendations for ceiling heights of 8 feet. So when regulations were established by federal housing agencies, they had to recognize these laws, which were still on the statutes, and fixed a minimum requirement of $7\frac{1}{2}$ feet. But since laws ultimately respond to public demands, there is no reason to despair of a logical approach.

The bases for logical standards are furnished by the American Public Health Association (APHA).[12] This basis is the volume of air required to maintain normal body temperatures and a minimum purity of air. With the amount of infiltration which takes place in the usual types of construction, a volume of 400 cubic feet of air per person in each room is adequate for purity. APHA states that the space adequate for required furniture is sufficient to assure this standard, but to assure the cubage it nevertheless recommends a minimum floor area for each type of room and for the aggregate of all occupied rooms, the latter to be sufficient to result in 800 cubic feet of air per person. As to windows "their open area should extend close to the ceiling, within 6″ if possible, to

[11] [12] "Healthful Housing," *op. cit.* p. 11.

permit hot air in the upper part of the room to escape."[13] There is no mention of the height of ceilings.

The only physical requirements affecting the heights of ceilings are the height of doors and windows. The minimum height of doors is that which is required for people of normal height to pass through. In recent years, with the standard of cottages taking the place of those of mansions and manor houses, the heights of doors for general use have become standardized at about six feet eight inches, which, with a trim four inches wide, would indicate a minimum ceiling height of seven feet. The minimum height of windows in private housing is determined by the upper sight-line of the glass, which it is pleasant to have not appreciably lower than the level of the eye—a purely psychological but potent reason. The eye of a person six feet tall is about five feet nine inches above the floor, which would bring the top of the frame of a steel sash less than seven feet above the floor, while wood sash might require a little more. Many a delightful old colonial house has ceilings no higher than this. It has been a common practice, at least in temperate climates of the United States, to keep the tops of doors and windows at the same level.

In the last analysis the factor determining the height of ceilings is usually psychological rather than physical; it must not be low enough to seem oppressive. Whether or not a ceiling is low enough to be "oppressive" depends first upon the conditions to which one has become accustomed, but this is subject to change with changed conditions. Basically, the sense of oppression depends largely upon the color of the ceiling, and probably most on the manner in which it is lighted. Soft tints of blue or green lend an atmospheric quality and reduce the sense of solidity and oppression; a heavy color or strong direct lighting of the ceiling brings it, seemingly, nearer to the eye.

Facing the state and municipal tenement house acts and the precedent established by Model Housing Acts, the USHA set a minimum ceiling height of $7\frac{10}{12}$ feet, established minimum sizes for separate rooms and for the aggregate of living room and kitchen, sizes which were adequate to produce a cubage in excess of 400 cubic feet per person in the several rooms and 800 cubic feet for the aggregate. It is interesting to note that FHA, being free of the tenement house laws, established a minimum of $7\frac{6}{12}$ feet for ceiling heights (7 feet in attic rooms) and minimum sizes of rooms, which together with the minimum requirements for floor areas produce a cubage slightly less than 400 cubic feet per person. The experience of FHA seems to indicate that on the main floor, ceiling heights of $7\frac{6}{12}$ feet are most popular, at least in the northern climates. So it is evident that, from the point of view of personal satisfaction as well as of health, it is in order to consider ceilings lower than the $7\frac{10}{12}$ feet of USHA standards.

Lower ceiling height for any given area of building means smaller cubic contents and smaller cost. If, however, we hold to the original cubic contents of a given unit of building, lowering the ceiling height means increasing the floor area, with only a negligible increase in cost. If in a unit of 556 square feet (the areas of the unit shown in the frontispiece) with a ceiling height of $7\frac{10}{12}$ feet, we reduce the ceiling height to $7\frac{6}{12}$ feet, while maintaining the same cubic contents, we then increase the floor area about 25 square feet; if we drop the ceiling height to 7 feet, we have an increase of 67 square feet. Twenty-five feet would go a long way toward providing more space for kitchen work and for the active daytime use of bedrooms. For the lower ceiling levels, where the ordinary concrete floor slab is used, the concrete L lintels over the windows should have the short arm of the L turned up instead of down, but if thick porous slabs were used the lintel would be in the thickness of the slab. Table XXIII shows floor areas required for individual rooms of different heights on the basis of 400 cubic feet per person. An excellent example of windows extending to ceiling can be seen in the second story of the Romona Gardens houses —*Plate XIII, $A_2$, p. 44.*

TABLE XXIII. FLOOR AREA AVAILABLE PER PERSON FOR DIFFERENT CEILING HEIGHTS, AT 400 CU FT PER PERSON

| Ceiling Heights | Persons | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | Square feet | | | | | |
| 7′–0″ | 57.2 | 114.2 | 172.0 | 228.0 | 286.0 | 343.0 |
| 7′–6″ | 53.4 | 106.8 | 160.2 | 213.6 | 267.0 | 320.4 |
| 8′–0″ | 50.0 | 100.0 | 150.0 | 200.0 | 250.0 | 300.0 |
| 8′–6″ | 47.0 | 94.0 | 141.0 | 188.0 | 235.0 | 282.0 |

The washing done in the kitchen, even when it is not the entire family washing, is, as we have previously pointed out, a major contribution to the acute congestion in the kitchen so generally complained of. One cure would be to take the washing function out of the kitchen and put in an enlarged bathroom, from which we have removed the water closet to a separate space. The increased area required would be about three-fourths that saved by reducing from $7\frac{10}{12}$ to $7\frac{6}{12}$ feet. By thus transforming the bathroom into a washroom we eliminate the need for laundry space and equipment in the basement, the allowance for which per family is from 20 to 24 square feet or a volume of 140 to 186 cubic feet, probably two-thirds of which could be saved—not to mention plumbing, dryers, etc. This saving gives us a credit to apply at some other point needing increased areas or items involving extra cost—such as a balcony or a bay window. The details of the effect of this on planning we shall discuss a little later.

The inadequacy of the standard for bedroom space becomes evident on perusing "Unit Plans." Nowhere are chairs indicated in the furnishing of any bedrooms, nor is there often any room for them. Nowhere is a crib indicated; nor is there often room for

[13] "Healthful Housing," *op. cit.* p. 11.

one. In the rooms available for children, nowhere is there indication of a study table nor room for any, though there should be one for each child; and there is little or no floor space for play. Somewhere there should be room for a sewing machine, and it would take no more space in a bedroom than in the living room. As balconies are not indicated, the baby must be taken to the grounds outside for its airing, regardless of weather, and that may mean a serious interruption to the day's work of the mother and a drain on her energy. The conditions indicated on the unit plans are the condition which have usually been built into the projects. One choice seems to be between the prevailing ceiling height, with inadequate floor space, or lower ceilings with adequate space.

Children's rooms might also be helped considerably by the use of double-deck beds. But APHA advises against them because of danger of infection from mouth spray, and for the same reason advises that individual beds be three feet apart, and by inference double beds are taboo. In the USHA Unit Plans, where two beds are indicated in one room, they are in the majority of cases shown one foot or less apart because of the limitations in floor area. While no double beds are indicated on these plans, they are in common use in USHA-aided projects.

Since it thus appears that the APHA standards are not attainable at the present time, it may be reasonable to suggest that, because of the floor space which would be liberated, double-deck beds also be recognized as acceptable, at least for the time being. From considerations of infection and of privacy, and the latter possibly may be the more important, double-deck beds are preferable to ordinary double beds. *Plate XLI, $C_3$, p. 195.* Since the occupant of the upper deck is out of reach of spray, the chances of infection would seem to be less than in the case of single beds spaced closely, as they usually are. Moreover, when the upper occupant has some respiratory infection, he can either change beds with the lower occupant, or the lower occupant can have some protection by hanging some sheer material (such as cheese cloth) at the head of and along the outside of the upper bed—a protection which can more readily be arranged in a double-deck than in single floor beds.

In the account of Housing in France, we discussed the use of vent shafts for the water closet compartment (as a substitute for an outside window), calling attention to the fact that for decades in this country an interior location has been the usual one and legally approved for bathrooms in high class hotels and apartment houses. FHA approves interior bathrooms, provided they have ventilating skylights; earlier it approved ventilation by means of a duct having a cross section area of 2 square inches for each foot of floor area, without provision for mechanical means of accelerating the draft. The test of the validity of this idea is whether or not there is reason to believe there will be adequate supervision to insure uninterrupted operation, a matter which the FHA was not in a position to control but which could have been controlled in USHA projects. A constant upward draft can be assured by placing in the vent duct an uninsulated hot water or heating riser, or by capping the duct with an automatically oiled rotating ventilator.

To indicate some improvements which might result from the several suggestions which we have been making, we offer a "Possible Plan" shown in Plate XLII, E, p. 196. With a ceiling height of 7.357 feet, the floor area is 640 square feet, or 7.93 per cent greater than the area of a $4\frac{1}{2}$ room unit shown on Plate IX, $B_2$, p. 27, the cubic contents being the same in both.[14] In other words the area is about 193 square feet greater and the cubage only about .006 per cent greater. The major advantages of the plan are that enough area is gained for (1) a washroom and separate water closet, (2) a parents' room large enough for a crib and sewing machine, and (3) rooms of greater breadth in comparison with the depth, which facilitates the location of furniture and makes it possible to place near the window such furniture as requires good light. It is not assumed that the plan would be incorporated in any scheme without adjustments. It is made solely as a demonstration of the different type of plan which might result from a few changes in present regulations or assumptions—such as ceiling heights, shallower buildings, and the use of mechanically ventilated interior water closets. The bay window and the balcony would be paid for with the savings arising from the omission of the common laundry. The large windows facing south and certain other features indicate the principles determining room location, stated in the following chapter.

### Management and Design

Management can secure or can spoil the objectives of any housing design. This is true not only of the broader objectives but of many details of the design as well.

Not only is the abundant supply of electricity liable to waste and abuse, but heat also can be wasted and abused. Wherever a supply of heat is available at no charge to the user, rooms are kept at high summer temperatures, and are too often tempered, not by turning down the supply at the radiator, but by throwing the windows open wide. By maintaining these high temperatures we not only soften ourselves, but we are throwing to the winds all idea of thrift. This is bad enough for those who can do so and still have plenty to pay for what they want—maybe a trip to the semi-tropics when their vitality ebbs. To permit such practices in public housing projects is to undermine both thrift and hardihood, and postpone the day when the beneficiaries of subsidies can set them aside and go

[14] In "American Housing," *op. cit.*, p. 135, the cubic contents method is referred to as an "unscientific method of estimating costs." The method, however, is entirely valid when comparing similar designs, and when coefficients are used for differences in costs in different regions and different years.

forward unaided. To enable his tenants to do this should be the goal of every project manager. It is not a question of economic project operation, nor of kindly charity; it is a question of building physical and mental stamina, of encouraging that coöperative spirit which is essential to good citizenship.

The American Public Health Association has stated the need for windows of certain minimum areas, in proportion to the size of the room; the USHA has required that such windows be built into the housing. On a sunny, mild winter morning I visit a housing project, the management wants me to see a certain apartment which they feel is furnished with exceptional taste. I enter a colorful apartment, radiant with electric light, the shades are fully drawn, over these are full width and full length sheer curtains; over these again opaque curtains, drawn most of the way. But "Why?" "Oh, I like the electric light better." Either shades or one set of full width curtains are necessary for privacy and at times in some rooms to prevent glare, but, when used as these were, they make a travesty of the requirement for adequate daylight, nullify the investment in windows, and waste electricity. Advice to incoming tenants might suffice; or maybe it means metering all electricity at a not too low cost.

Inappropriate furniture often defeats a good floor plan. When tenants bring in their old furniture, not much can be done about the size of it, if too large, until time comes for replacing it. The usual procedure is for tenants to buy what, on the installment plan, seems not too expensive furniture; but all too frequently it is of the same size and pretentiousness as furniture which is designed for larger houses and larger incomes. Families with incomes insufficient to pay normal rents have nothing to waste on shoddy furniture. What they should have is furniture of simple craftsmanlike design —of the better kind that is made for summer cottages. *See Plate XXIX, I, p. 95.* Such furniture can be had at a great saving over the kind usually bought; it comes either stained, painted, or in the natural wood for home finishing. If not already in the local market, management could encourage local dealers to get it, or help the tenants order it by mail. In a new project, several model rooms so furnished in the natural, stained and painted, especially with an eye to small furniture for children's rooms, would show the way, as would samples and occasional talks on furnishing by competent people after the housing is occupied.

Old furniture is not hopeless. Hangings may be better and cost less if done with good taste. In advance of the completion of the Vladeck Houses in New York's lower east side, the nearby Henry Street Settlement proceeded thus: "People in the neighborhood bring in their furniture to the settlement workshop, where under the guidance of directors they remodel and repair it. . . . Utilizing furniture thus renovated, the committee furnished a demonstration living room for the astonishingly small cost of $24.73, of which the largest item was $6 for paint. Unbleached muslin drapes, carrying a linoleum print design of Brooklyn and Williamsburg bridges, cost 9 cents a yard." A young painter and muralist "supplies designs for drapes and walls and guides the efforts of home makers in creating their own designs." Other similar instances might be cited. Such methods do more than save money, they inculcate thrift and tend to break down the all-too-prevalent idea that self-respect calls for a pretentious front.[15]

In Pittsburgh the Housing Authority had the coöperation of the home economics and the industrial arts departments of the public schools; also various groups of parent-teacher associations, in completely furnishing a typical dwelling unit. "The children of the schools first gathered old and unwanted furniture such as the tenants might possess. All the pieces collected were in a dilapidated state and were generally unsuitable for use. Not only were these repaired and painted by the students, but other pieces were fashioned, some of them from packing boxes."[16]

The constructive and economic value of such guidance and help can scarcely be overestimated. Until such procedure becomes general the objectives of good design will continue to be neutralized.

As design is an art, so is management—it is basically the art of diplomacy. The manager's most important activities call for judgment. His judgments are largely based on human relations. Routine work and decision can be delegated, but not so the decisions bearing on policy. This much is obvious to the most casual observer. But the full significance of the truth is best appreciated by the managers themselves, as is so interestingly and ably recorded by Abraham Goldfeld in his diary covering his ten years experience as manager of the Lavanburg Homes, in New York's lower east side.[17] Most important of the activities of the manager is that of creating and maintaining that morale and spirit of coöperation which makes of each project an organized civic group, a neighborhood, a field where the seeds of good citizenship are planted and nurtured. This, the highest goal of public housing, is in his hands.

One cannot meet the managers of our public projects in regional and national conferences without being impressed by their general high standard of intelligence, ability, conscientiousness, and their human understanding. The many problems and worries which they have to face in the early months of organizing their new field of civic activities have been a severe test of ability, resourcefulness and patience, but the managers seem to have taken the test as a challenge, they seem to be gathering from their experience greater conviction of the significance of their work. That such

[15] *Public Housing*, F.W.A., Washington, D. C., Jan. 30, 1940, p. 2.

[16] The Pittsburgh Housing Authority, Pennsylvania State College Studies, No. 14, by M. Nelson McGeary, Ph.D., 1943, p. 58.

[17] "The Diary of a Housing Manager," Abraham Goldfeld, National Association of Housing Officials, Chicago, 1932.

a high standard has been generally maintained cannot be an accident.[18] The ground work laid by the USHA and the continuing work by it and by the National Association of Housing Officials and the work of the individual housing authorities must to some extent account for the results.[19] If public housing can continue to operate without the injection of politics, which danger does not seem imminent, there seems every promise that those who live in these projects will catch more and more of the spirit of responsible citizenship, that from among the youngsters who are there generating will come many civic leaders, that from among the managers will come more such leaders as Octavia Hill, Jacob Riis and Jane Addams. The managers' opportunities and responsibilities are great. Whatever others may accomplish, with them lie the making or breaking of the objectives for which public housing is designed.

## Probable Future Trends of Site-Design

Throughout this book we have traced the progress of the design of projects and of the buildings in them; we have pointed out the shortcomings as well as the gains in design and the factors which have affected design. We have just discussed these points in their relation to the housing aided by the Federal Government in the United States, and suggested certain methods for the improvement in the design of housing units. Is there also room for improvement in site-designing?

### *Time for Reappraisal of Certain Factors*

Site-designing involves both the enclosed space and the unenclosed spaces or buildings. As the buildings are the most essential fixed units of the project they are the most important determining factor in site-design. Before attempting to answer the foregoing question we shall consider certain of the basic requirements in the design of buildings, requirements which in our opinion are due for a new appraisal. In recent years there has been a gradual accumulation of knowledge in regard to the utilization of the direct rays of the sun for heating buildings, and a better understanding of their beneficial effect on people. To this is related the amount of daylight illumination needed in various rooms. Certain other factors of design also seem to need a reaffirmation or reappraisal, such as orientation for favorable and unfavorable breezes, provisions for the care and recreation of children of the pre-school age, and criteria for determining and comparing the intensity of land use.

Essentially a building is a segregated space under climatic control, usually subdivided for a number of related uses. The type of climate within the building is determined by its use, which in dwellings is of various types—kitchens, living-rooms, bath-rooms, bed-rooms, and so on. Temperature, sunshine and skyshine are the climatic elements which it is desirable to vary with room use. These factors are affected or controlled by orientation of the buildings and rooms in relation to the sun, to prevailing seasonal breezes, to other buildings, to highways, and to the open spaces. Akin to these, in their effect upon design, are two other environmental factors, quiet (or noise), smoke and outlook, which are related to the man-made environment rather than to the natural environment. Thus site-designing is the three-dimensional organization of enclosed and open spaces—an organization which involves various types of communication between the enclosed and the open spaces—windows, doors, paths, drives, utility ways.

### *Orientation as Affected By the Several Elements of Insolation*

As much of this discussion hinges on the subject of insolation (the utilization in buildings of light and heat coming from the sun) we will start with a review of the elementary factors involved, without going into the causal astronomical phenomena, with which we can assume every site-designer is familiar. For our purposes we may state, (a) that the sun's rays contain heat, light and ultra-violet rays (a component of white light); (b) that these travel from the sun in bundles of uniform intensity per given area measured at right angles to the direction of travel, and of lesser intensity for the same area when measured on a plane oblique to the direction of travel, the intensity diminishing with the obliquity of the angle; (c) that they lose some of their intensity as they travel through the earth's atmosphere, the loss being proportionate (1) to the extent of atmospheric impurities (humidity, dust etc.) (2) to the distance of travel through the atmosphere, a distance which varies from the maximum at sunrise (when the rays pass tangentially to the point of observation) to a minimum at noon in the summer solstice, when the sun is most nearly overhead; (d) that these two means of losing intensity may offset one another—thus in exceptionally clear weather the intensity may be greater in the forenoon or afternoon than at noon at a time when the atmosphere is humid; (e) that the temperature of the atmosphere does not affect the temperature of the sun's rays; (f) that the greater part of the sun's rays pass through clear glass when it is free from moisture or dust, but that most of the ultra-violet rays are excluded by ordinary window glass, and practically all of it is excluded by *any* glass which is not perfectly clean and free from moisture.

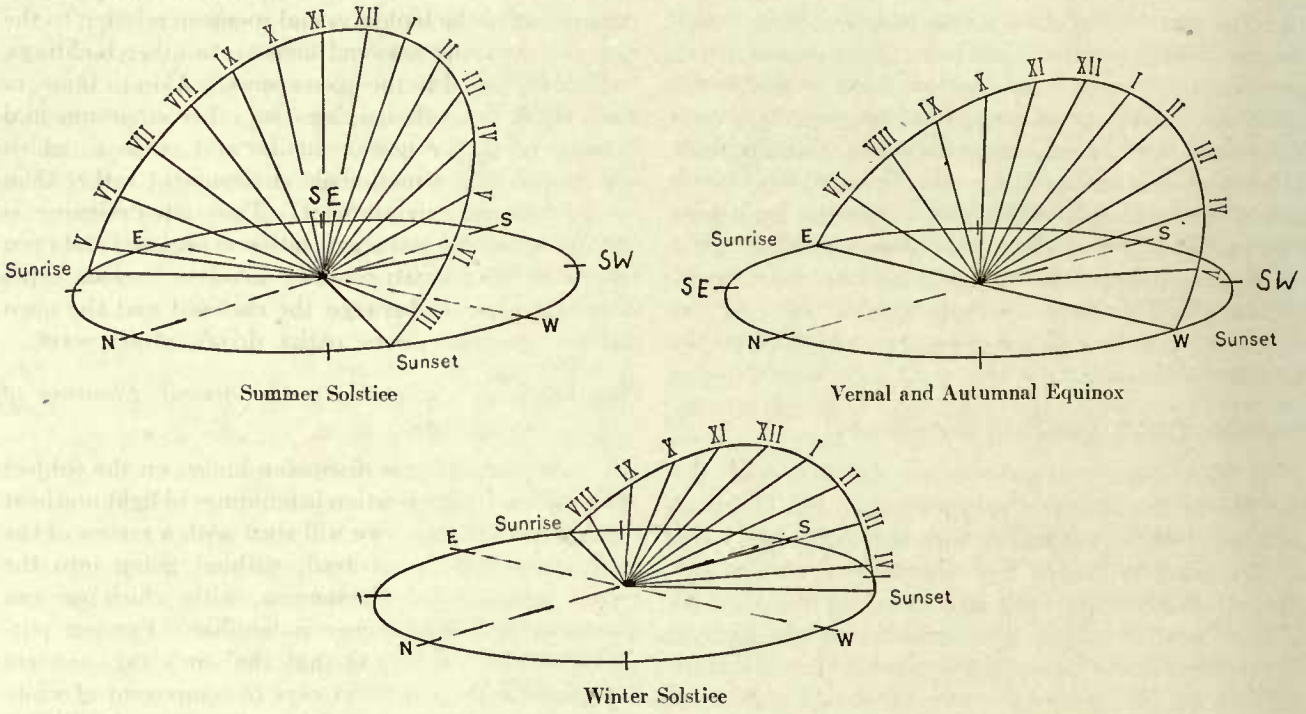
Stated in terms of buildings, from the foregoing we conclude that: (a) a wall facing the sun's rays at right angles receives the sun's rays with more intensity than a wall facing obliquely; (b) more specifically, that the south wall of a building receives more of the sun's rays at noon in the winter solstice (when in the 42°

[18] For some of the problems which management faces, see "The Honeymoon of Housing Is Over—Slums Clearance Has Begun," by Berthoff M. Pettit, NAHO, 1313 E. 60th St., Chicago, Sept. 1943.

[19] A Housing Management Training Institute has been organized at the Western Reserve University, upon recommendation of the National Association of Housing Officials—April, 1944.

latitude, the altitude of the sun is but 24°33′ and the angle of incidence on a vertical surface is 65°27′) than at noon in summer (when the altitude is 71°27′ and the angle of incidence if 18°33′); but it also means that at the summer solstice at about 6:50 o'clock in the morning and 5:10 o'clock in the afternoon the sun shines on walls at right angles to the rays, on walls facing a little north of east and south of west respectively with the same intensity as at noon in the winter solstice. *See Graph XIII and Table XXIV, below.*[20]

Graph XIII. Diagram of Apparent Path of the Sun and Angles of Sunlight at Hours of the Day, 42° North Latitude*




Perspective diagrams showing the apparent path of the sun, and the angles of sunlight at the different hours of the day, for Lat. 42–0 'N.

Table XXIV. Altitude and Azimuth of Sun for Hours of the Day, at the Equinoxes and Solstices, 42° North Latitude

| HOUR. | | | WINTER SOLSTICE. | | EQUINOXES. | | SUMMER SOLSTICES. | |
|---|---|---|---|---|---|---|---|---|
| A.M. | P.M. | Hour Angle | Azimuth. | Altitude. | Azimuth. | Altitude. | Azimuth. | Altitude. |
| 7 | 5 | 105° | ..... | ..... | ..... | ..... | 117°–10′ | 5°– 9′ |
| 6 | 6 | 90° | ..... | ..... | 90°– 0′ | 0°– 0′ | 107°–52′ | 15°–27′ |
| 5 | 7 | 75° | ..... | ..... | 79°–50′ | 11°– 5′ | 98°–46′ | 26°–17′ |
| 4 | 8 | 60° | 52°–49′ | 4°–17′ | 68°–53′ | 21°–49′ | 89°–12′ | 37°–23′ |
| 3 | 9 | 45° | 41°–38′ | 12°–28′ | 56°–13′ | 31°–42′ | 77°–58′ | 48°–27′ |
| 2 | 10 | 30° | 29°– 0′ | 18°–55′ | 40°–47′ | 40°– 4′ | 62°–47′ | 58°–57′ |
| 1 | 11 | 15° | 14°–58′ | 23°– 6′ | 21°–49′ | 45°–52′ | 38°–36′ | 67°–38′ |
| 12 | 12 | 0° | 0°– 0′ | 24°–33′ | 0°– 0′ | 48°– 0′ | 0°– 0′ | 71°–27′ |
| Sunrise and Sunset. | | | | | | | | |
| | 4 h. 28 m. | | 57°–37′ | 0°–0′ | ..... | ..... | ..... | ..... |
| | 6 h. 0 m. | | ..... | ..... | 90°–0′ | 0°–0′ | ..... | ..... |
| | 7 h. 32 m. | | ..... | ..... | ..... | ..... | 122°–23′ | 0°–0′ |

*Graph XIII is based on Fig. 2, and Table XXIV is based on Table I of "Orientation of Buildings, or Planning for Sunlight", William Atkinson; John Wiley & Sons, N. Y., 1912. In this book are diagrams of shadows cast by buildings at various hours and seasons and the pattern of sunlight entering rooms at various exposures.

In this connection it should be borne in mind that in the early forenoon and late afternoon, when the angle of incidence of sun's rays is most nearly at right angles

[20] See also "Orientation for Sunshine," *Architectural Forum*, June 1938, cotangent diagram, p. 20. This article is an excellent, well illustrated summary of the basic principles of insolation.

to a wall facing it, the rays are passing through the atmosphere most obliquely and consequently with most loss of intensity due to atmospheric interference; and also that the loss of intensity is less in the clear weather of winter than in the more humid weather of summer.

In the case of walls facing east and west, during the summer, when we wish to avoid heat, the east wall is exposed throughout the forenoon, for $7\frac{1}{2}$ hours at the summer solstice on the 42° north latitude, and the west wall is similarly exposed throughout the afternoon —but in both cases more obliquely as noon approaches, and therefore with less intensity of heat. In winter, when the heat is most desired, the sun's rays would fall on the east and west walls for only about $4\frac{1}{2}$ hours each and always decidedly obliquely, consequently with little intensity. *See Graph XIII.* Thus a southerly exposure provides the maximum of insolation at the season when most desired, and an easterly or westerly exposure provides a maximum insolation at the season least desired.

From the foregoing discussion we conclude that (a) *to gain the advantages of insolation buildings should be oriented with their broadside at right angles to the sun's rays at the season or time of day when the effects of the sun's rays are most desired, and obliquely to them at the season or time of day when the effect is least desired.*

But if a building is oriented broadside to south and north, then the rooms to the south will have an exposure favorable to insolation, and the rooms to the north an unfavorable location. In solution of this condition, it is obvious that if all or any of the several effects of the sun's rays are more desirable in some rooms than in others, then to those rooms in which the effect is most desired should be allocated the preferred exposure. Now it remains to determine what orientation will make available the maximum advantages of orientation. This brings us to questions which are not new but which we feel need reaffirmation, if not reappraisal. Is it better, from the point of view of insolation, to orient the buildings so that certain rooms receive the maximum of winter sunshine or so that all rooms receive some? Will the desired orientation for sunshine coincide with the desired orientation for other considerations, notably for the favorable breezes of summer and for the unfavorable winds of winter?

As the question of breezes is most readily answered, we shall take that first. Over a large area of the United States the fair weather summer breezes are mostly from somewhere between south-east-by-south and north-west, and more from the southwest than from any other direction. Under these conditions, a building with one of its longer sides facing somewhere between the south and south-of-west is in a favorable position for the desirable breezes. It is usually possible so to plan a dwelling, single or multi-family, that the breezes will pass through from windward to leeward, thus distributing the benefit to rooms on the leeward side. In order that all buildings should have a fair exposure to the breeze, on a flat site the buildings when in rows parallel or approximately parallel, should not be too long, and the rows should preferably be staggered in relation to those north and south of them; although the tendency of the wind to blow slightly downward (due to friction at the ground of the moving mass of air) tends to hurdle the obstacle of low houses. It is true, however, that this orientation exposes the north side to the unfavorable winds of winter. For this reason, and because most of the heat of buildings is lost through the windows, it is desirable that rooms requiring the smallest window area be placed on the north side.

The question of whether all rooms should have some sunshine, or a few should have a maximum amount calls for an analysis of the specific effects of sunshine, of its advantages and disadvantages. The advantages to those living in the dwellings are: (a) the stimulating physiological effect (due chiefly to the ultra-violet rays) (b) the stimulating psychological effect, (c) the availability of the sun's heat as a partial substitute for artificial heat. In a northern climate all of these advantages are most desired in the winter, because of the shorter days and the reduced intensity of the sunshine, because then most people are more house-bound and probably receive less than a normal amount of sunshine.

The *direct physiological* benefits of sunshine so far as science has determined are due largely to the ultra-violet rays, which affect the individual only when and to the extent that the individual is in direct sunshine. The rays do not penetrate ordinary glass. There is a specially prepared glass which they penetrate, but any film of moisture or dust on the glass will obstruct the rays. Dr. Winslow tells us that people "who go outdoors get plenty of insolation." The mother of the family and her very young children who live in houses without balconies may not be able to get into the sunshine as often as health requires, but since the special glass is expensive and requires constant cleaning, for them the all-duty balcony would seem to be the best means of making the sunshine accessible.

On the other hand, of the *psychological effect* of sunshine there can be no doubt. Thus the cheering effect of the sunshine is particularly desirable in the *kitchen*, where the housewife spends so much of her time. This effect can be had directly, through the kitchen window, or indirectly through the living room or dining room, when these have a southerly exposure. In this connection it should be noted that the outlook from a northern window is toward the sunlit southern side of the buildings and the trees seen from the window—a very cheering outlook. Also in the *dining room* the cheering effect of sunlight at breakfast is particularly desirable, as it is for the week-end midday meals. In the living room, or dining room functioning as a living room, because of the intensive use by all members of the family on week-ends, the cheering effect of sunlight is again particularly desirable. In *bedrooms*, as such, the psychological effect would be

desired only in the early morning for a brief period. When used during the day by children of school age, it is usually in wet weather, when they are ill, or when studying in the late afternoon and, for much of the time, after sunset. Older people use the bedroom during the day mostly for napping. Then too, for much of the year the outlook from a northerly bedroom is against that same sunlit landscape. Bathrooms or "wash-rooms" we would not give a high rating for sun cheer, because of the condensation on the glass when they are in use.

The *sunheat*, which is most desired in winter, is available in two ways, by absorption in the walls, and by coming through the windows, movable or stationary. That coming through the windows is the more effective, provided the glass is double, with hermetically sealed inter-space, and the area is extensive. This condition is most readily achieved in *living rooms and dining rooms*, where the furniture, even if built-in, need not be close enough to the movable windows to limit the lateral extent of glass or the height from the floor, and where usually the floor area and the extent of enclosing walls and partitions is sufficient to permit of a flexible arrangement of furniture. In the *kitchen* the heat of cooking usually makes more heat undesirable, except where cooking is done by electricity. Even when the extra heat might be desirable, the equipment limits the lateral extent of the windows and sets the sill at a high level, and so leaves only a relatively limited area for glass. A *bath room* is quickly heated by the hot water used in bathing, so needs no extra heat. In a "*wash room*," when used for drying the clothes, sunheat would be very desirable. In *bedrooms* or "personal rooms" windows are apt to be open at night, and the occupants out during most of the day, so they require little heat, and usually the bulky furniture does not leave space for large windows.

The *advantage* of sunheat comes in the winter, when it can appreciably reduce the amount of artificial heat needed. It is readily available then because from about the middle of the morning to about the middle of the afternoon the sun is low enough to permit its rays to fall at a favorable angle on the southerly walls of buildings and through the windows. The *disadvantages* of direct sunshine which comes with sunheat come, (a) through receiving in summer more heat than is comfortable and wholesome and, (b) because of the glare which results when there is a superabundance of light entering a room, when uncontrolled as to its distribution. But since the methods of controlling glare are the same for all orientations, we shall not discuss it here.

Let us say a special word about the location of the *kitchen*. Because of the many hours which the housewife spends in the kitchen, the psychological, or cheering effect of sunshine is in itself sufficient reason to give it a preferred place for sunshine. But, if there were no fixed partition between the kitchen and the living-room or dining-room and these received the full sunshine throughout their width, the cheering effect would extend also to the kitchen, so that locating the kitchen next the south wall might not be essential. Moreover a northerly exposure for the kitchen has the compensating advantages that in the summer, when the windows are open, the southerly breezes do not blow the heat and moisture of the kitchen back into the house, that the outlook is toward the sunlit side of the outside world, and the mother can keep an eye on the baby enjoying the sunshine on the sunny side of the living room or dining room.

According to the foregoing analysis, (1) the desirable exposure for certain rooms is a southerly one—varying from southwest to southeast according to prevailing breezes and other conditions, and (2) the rooms which can to best advantage utilize all the various advantages of a southerly exposure are the *living room* (for physiological, psychological and heating advantages), the *dining room* (for psychological and heating advantages), the *kitchen* (for psychological advantages), and any *bedroom or "personal room"* planned on the assumption that the occupant will spend much time there during hours of effective sunshine (principally for psychological advantages). The question of the amount of daylight or skyshine desirable in other rooms we shall discuss a little later.

*Means of Mitigating Summer Heat*

As we have said, in the designing of housing the sunshine which can be used to advantage is that of winter, when there is less of it and when many people are house-bound. The *heat of summer* however we desire to mitigate. This can be accomplished at least in the first story and possibly in the second story, by the judicious planting of shade trees. They should be of an open growing type so as not to create too dense a shade and not to obstruct the summer breezes, and should be spaced with particular regard to shading the largest glass areas in the middle of summer forenoons and afternoons, and at such a distance from the buildings and from one another as not to create a shade so dense or so complete as to discourage the growth of grass or shrubbery, or darken the first floor. If the former requirement is satisfied the latter probably will be also. In our northeasterly states the European plane tree meets the requirements particularly well for one story buildings, the elm for taller buildings. Obviously in very tall buildings only the lower stories can benefit by the shade from trees. Evergreen trees have the disadvantage of keeping out the winter sun. Their use should be limited to positions in which they will not cast shadows on the windows, and where they will add variety to the planting or serve as windbreaks.

For buildings or those parts of them where the shade from trees is not available, it is desirable to have some sort of hood, structural awning, trellis or balcony over the sun-windows, projecting beyond the face of the building as far as need be to throw the entire glass area in shadow during the middle of the day in summer. *See Plate XXXVIII, C & E, p. 150, Plates XVII–*

*XXXVIII, and Plates XIV, $B_4$, p. 45, XLII, $C_2$, p. 196.* The question of whether or not it is advantageous to shade the entire wall from the summer heat would be determined largely by whether or not enough artificial heat would be saved in winter to pay for the investment in the hood. That would vary with the climate, the type of construction, and the extent to which the wall might be exposed to cooling breezes. While the balcony may be more expensive than the hood, it is so desirable for other reasons that it might prove in many cases to be the best solution. A variation of the balcony is a shallow loggia. The correct projection of balcony or recess of loggia is a matter of mathematical calculation. *See Table XXIV and Cotangent Diagrams in "Orientation for Sunshine," op. cit., p. 20.* (To arrive at the angle for hours or latitudes not given in documents, interpolation will be necessary.) The loggia should be of such length that the end walls will not cut out an unduly large proportion of the morning and afternoon sun.

*Orientation as Affected by Skyshine*

The amount of daylight required in various rooms or other spaces is a factor in determining the distance between buildings. Skyshine, or ordinary daylight other than sunshine, because it is uniform and without glare, is preferable to direct sunlight for most work and for reading. The amounts needed for various types of work have been scientifically established, as have the sizes of windows necessary to admit the required amount of light.[21] Any amount of light desired can be had by use of the proper size windows. Since it is desirable to have the light penetrate well into the rooms, it is desirable that the angle between the top of the window and the effective horizon be kept reasonably low, *i.e.*, that the buildings in which the windows are located be at such a distance from the buildings opposite, or from trees or other objects which might obstruct the light, that the skyshine may enter the room at a relatively low angle. An angle of 45° is commonly recognized as satisfactory, from which it results that the distance to the opposite buildings should be at least as great as the height of the opposite buildings, in relation to the windows in question. In principle the same reasoning applies to trees; but if trees are selected which have a small spread in relation to their height and if the spaces between them are adequate, they may be at a distance from the building appreciably less than their height.

Traditionally it has been mandatory to have direct daylight for public hallways and stairways in multi-family houses. The tradition comes from the days of feeble gas illumination, when the janitor had to light each fixture by hand, when a draft might blow them out, when the protruding fixtures were an obstruction to moving furniture through the hallways, and when janitor service was unreliable. Surely in an age when electric lighting is already supplied in the amount needed for night lighting and can be controlled from a central switch for all floors, and for all buildings in multi-building projects, this mandate needs reappraisal. To abolish the mandate for daylight for public stairways would be to eliminate an obstacle to flexible planning; or to speak in the positive, it would make possible better and more economical planning. This same reasoning might seem to apply to sleeping rooms and kitchens, but the fundamental difference is that these rooms need windows of generous size for summer ventilation and for stimulating outlook—for as we have pointed out in the preceding chapter, sleeping rooms should also be individual living rooms, or "personal rooms."

*Playgrounds for Pre-school Children*

Another factor affecting site-planning is the size and location of playgrounds for pre-school children. Since so many mothers have been in war work, the need for day nurseries has become real. As we have seen, in many foreign countries it is common for both parents to go out to work, and day nurseries are common in low-cost housing, particularly subsidized housing. They exist in some of our public and most of our philanthropic projects. Will they become more general in post-war low-cost housing? Probably not in most projects if we can return to pre-war conditions, under which in most families only one parent went out to work. Certainly not if we are to achieve our desired economy of abundance. From the latter more optimistic outlook scattered playgrounds for children of this age would seem to suffice in most projects, as they have in the past. From the less optimistic outlook, day nurseries, with playgrounds adjoining them would seem to be the solution. The exaction which they make on space is not great, but the exaction on location is, for each should be within easy hailing distance of each parent who has a child at play—a standard which for this age group demands many small play areas rather than a few larger ones, a fact too often overlooked, but well exemplified in Holly Court. *See Frontispiece.* That this has a bearing on site design we shall see presently.

*The Measure of Merit in a Site-Design*

The true measure of the merits of a site-design is the extent to which the tenants receive all the advantages of sunshine, skyshine, fair-weather breezes, outdoor recreation space, verdure, pleasing outlook, and so forth, coupled with the extent to which convenience and economies have been achieved in the disposition of buildings, drives, recreation areas, and utility lines. The percentage of land covered by buildings has been a commonly accepted measure of the relative merits of site designs. In a limited way they are such a measure, but only for approximate com-

[21] These data and data in regard to all the health factors which we are discussing are found in "Basic Principles of Healthful Housing," which appears as Appendix A of "Healthful Housing," *op. cit.*, pp. 184–216.

parison. Coverage has little meaning for a direct comparison when the buildings in the projects compared are not of the same number of stories. That coverage is good only for approximate comparisons becomes clear if we consider that as between two projects being compared the greater coverage may be due entirely to more skillful planning, to a better adjustment in the use of space, resulting in more conveniently placed recreational areas, shorter roads, paths and utility ways, better outlooks, all without in any way compromising any essential factor or feature. The result is economies in the cost of land and in development. In the same manner, one project with greater *density* than another may, because of skillful planning and placing of buildings, actually afford a better environment than another with less density. In the interest of economy, the effort of the designer should be to achieve the highest coverage and density consistent with the standards which are recognized as reasonable in each instance. A low coverage or low density may result from nothing less than slipshod planning.

In summarizing the foregoing suggestions and recommendation let us state at the outset that the suggestion of a southerly exposure is not a new one. What, if anything, is new is the greater emphasis on the importance of orientation for *all* the advantages of insolation and the suggestions (a) that, considering all these advantages, in the smaller dwelling units the living-dining room should have first priority for a southerly exposure, and the kitchen second priority, while in the larger units, having a separate living room, the kitchen might well be reduced to third priority; (b) that stairways and public halls do not require a location next an outside wall; (c) that orientation for winter insolation involves measures for mitigation of sunheat in summer, affecting both the buildings and the location of trees; (d) that the extent to which mothers work out has a bearing on the disposition of playgrounds for pre-school children.

*Summary of the Effect of Insolation on Site-Design*

What is the effect on site-designing of all the considerations which we have advanced? Considering first the point of view of "insolation" (making the most of direct sunshine for all purposes), in those large areas of United States where the desirable breezes of summer are from between west and east of south, on an undeveloped outlying tract of level ground or ground sloping to the south-west we would have our multi-family buildings arranged broadside toward the south-west. In climates where there is much snow, such an orientation has the further advantage of exposing the ground on the northerly side of the building to the best of the early morning sun, to melt more rapidly the snow and to help the growth of grass, shrubs or garden. On ground sloping to the south or south-east the buildings could face east of south sufficiently to have later afternoon sunshine on the rear wall.[22]

On a site with the topography so broken that a southerly exposure would not be available for all buildings, some buildings could face east and west, with the narrow ends of the buildings toward the south; others might be cross-shaped, a type of plan particularly appropriate for apartment buildings, especially those with elevators. In some large projects in which low buildings predominate it might be desired to have some apartment buildings to increase the variety in the type of units available, as for elderly people who do not wish to assume the responsibility for the upkeep of gardens, and for young couples with no children. Extra height in such buildings would add variety to the composition. *See Plate XXXV, p. 109.*

In the disposition of rooms as suggested and with the buildings arranged in parallel groups extending east and west, the living room side of one group of dwellings might thus face the kitchen side of the group to the south. In this country, as a relic of the days when the stable and mayhap chickens and pigs, the cesspool and an open garbage receptacle closed the vista on the kitchen side of the house, houses had a definite front and back side, a front garden and a back yard and the standard of upkeep of the back yard was not usually that of the front. This idea is still fixed in many minds. There is no present day need for such a distinction. Many of the best designed suburban houses have the kitchen on the street side and the living room and dining room facing a garden on the opposite side.

Under the present system of garbage disposal in this country, a place for garbage cans is the only factor which could logically make a distinction between front and rear. That this can be satisfactorily handled is demonstrated in many existing projects. Sooner or later, I have no doubt, we will be disposing of our garbage and food cans by a system similar to that by which we dispose of our septic sewage—as in some recent housing projects in France. *See page 111.* Machines for grinding the garbage, so that it will go into the existing sewage system will help but will not care for the cans. Our war time system of can reclamation is too crude for permanency. Even with our present system of disposing of garbage, there is no longer any reason for thinking of the "back" of the house or the "back yard" as unsightly. We should be thinking in terms of the street, lane, court, and garden side, of living room or kitchen side, of north, south, east or west side, but not of front and back.

[22] The angle necessary to accomplish this in any given climate can be found in Table XXI, in the graph on p. 22 of "Orientation for Sunshine," *op. cit.*, or can be had from the U. S. Weather Bureau, as can data on the amount of heat available for sun-heating, and for the appropriate extension of hoods or balconies to shade the southerly windows in summer.

With buildings arranged in rows, which are parallel or approximately so, the most convenient location for the playgrounds for children of pre-school age is between the alternate rows. Such playgrounds situated between the gardens on the north and south sides of the houses will be in the sunlight. If the site design should call for a drive passing each house, then the drive would be located between alternate rows, with the playgrounds in the intermediate rows. This would give access to the playgrounds from all houses without encountering any traffic other than pedestrian. However, it would be entirely possible to do without roads between the rows if the rows were relatively short. To accomplish this, diagrammatically speaking, the road system would be a series of parallel roads running in the northerly and southerly direction, serving a series of lateral courts, the roads being cross-connected at the north and south ends by roads running east and west. This has the advantage of greater quiet and privacy and of greater economy in both first cost and maintenance. The utility ways would normally follow the same pattern, with the relatively short main lines in the roadways and with the house lines connected to relatively small laterals—a great economy.

All the foregoing principles hold for groups of multi-family houses of all types. The same basic principles of maximum exposure to the south and of orientation for breeze also hold for single family houses. For them it need not, however, have the same influence in determining the orientation of roads and drives, since the individual lot may be wide enough to permit a southerly exposure even when the lot faces on a road running north and south. With a north and south orientation of roads, *culs-de-sac* or courts oriented east and west would be the logical solution where the distance between the north and south roads would permit them.

The chief advantage of insolation is basically psychological—the cheering effect of sunshine and the variety of interior effect brought about by the shifting angle of the light. There can be no doubt that this cheer or buoyancy has a favorable physiological reaction. The heat which is gained by a high degree of insolation is at least a valuable by-product, one which may appreciably reduce the cost of heating. The orientation of buildings for a high degree of insolation offers no obstacle to flexible planning, except possibly on small sites of irregular shape, or sites with peculiarly broken topography—and when considering the acquisition of such sites the advantages of insolation should be weighed. Such orientation does not imply a rigid adherence to a due south exposure, but allows of sufficient variations from due south to permit curved or broken building lines and roads. It does hinder the introduction of square buildings, or buildings only slightly elongated; it does not hinder interesting groupings of buildings; nor does it hinder other techniques for adding variety, such as variations in building heights, in materials and textures. *See Plates XXXVII, 1; XXV, $D_1$; XLVI, C; XIII, $A_1$; XV, $B_2$, $C_3$; VII, E; IX, A.*

To sum up, site-designing, in the future, we predict, will be largely influenced by changes in the planning of buildings, based on the broad principle that the maximum of sunshine should be made available to all those rooms actually needing it, allocating to them the entire space next a southerly outside wall, and that the space next the northerly wall should be allocated to rooms requiring good light for work or other occupations. The ends of buildings, which afford extra exposure to sunshine, light and movement of air, should, in principle, be allocated to those units requiring the largest number of rooms. In this general arrangement, stairs, and the water closet (both mechanically ventilated (*see p. 213*), might, if need be, have interior locations. A new space, the "washroom" (*see p. 212*), taking the place of the bath room, would have an outside location, while community laundries, traditionally requiring a basement with outside light, would be eliminated—except that in some hillside locations basement community laundries might result in economies which would justify their use; and in elevator buildings of many stories, laundries might be located on every third floor on each stairway. To the foregoing changes we would add the greater floor area made possible by lower ceilings (*see pp. 211, 212*). Single family houses permit of even greater exposure of walls to the south than do multi-family houses, and many have already been designed to take the advantage of insolation. The principles here stated, we believe, are dictated by a scientific approach to planning. The lag of tradition is an ever present barrier to scientific progress, but eventually it yields.

## SECTION V. RESUMÉ AND CONCLUSIONS

*Resumé.*

In our introduction we posed a number of questions which would have to be answered before we could have a comprehensive understanding of our housing problem in all its aspects and implications: Just what is the housing problem? What is the justification for participation by government? How has government in other countries participated in supplying good housing? What are the economic and social factors, the financial and human factors involved? These general questions we have undertaken to answer. Also we have reviewed the housing policies and measures taken up to the present by the agencies of government in this country.

Going into some detail, we have indicated in what large proportion family incomes are insufficient for good housing and other necessities of life. We have pointed out the many hurdles in a slum environment. We have shown the fallacy of assuming as inevitable a continuation of past undesirable trends, and the possibility of recapturing earlier desirable social trends through an improvement of environment. We have pointed out the all but insuperable influence of early environment; and to how few are given that combination of native gifts and fortuitous circumstances necessary to rise out of a slum environment; that among those living in slum surroundings are generally found the largest families and that there is a consequent necessity for ridding the country of its slums, rural as well as urban, to the end that our citizenry may rise to higher levels rather than sink to lower ones.

We have pointed out three major methods for replacing poor environments with good ones, a way for each of the three groups in which family incomes have in the past been deficient in various degrees, these being: (a) for those not able to pay the full "economic" rent, aid with subsidies through adjusted rents in public housing projects; (b) for those able to pay the "economic" rent of housing only when produced and operated with economies comparable to those of public housing—aid through coöperative housing, financed in part by government loans at low interest rates; (c) for those who can purchase their own homes on monthly installments over a long period of years, aid through federal loans at low interest rates, conditioned upon agreements for organized neighborhoods to be maintained in continuity. We have further pointed out that while elements of these three methods have been developed by the several federal agencies, the application has been such that there are still large groups living in sub-standard housing for whom no federal agency has acted, and that the reorganization of the housing agencies on a war-time basis interrupted the normal progress of housing developments.

We have endeavored to picture the great problem which confronts us in the deterioration of many of the interior areas in practically all our cities, particularly the residential areas, a condition due to the obsolescence not only of the buildings but of the pattern of the streets and of the land bounded by the streets. We have shown that these obsolete areas do not pay to the city sufficient taxes for their own maintenance, that their maintenance must come from the taxes of other parts of the city, which in turn are constantly being encroached upon by the obsolescent areas; that this cannot go on indefinitely and that much further delay promises municipal disasters which in their aggregate may assume national proportions.

We have pointed out that by transforming the pattern of these areas from the pattern determined by the way of living of a former time to the way of living of our own time, there is possible an added supply of desirable low-cost housing. We have pointed out that it is recognized by groups of widely divergent interests and of widespread influence that, because of the magnitude and the national scope of the problem, the solution of the problem requires special legislation by municipal, state, and federal government, granting to each powers of control far greater than have heretofore been available in this country; that, while there is agreement on the main features of this legislation, there is disagreement as to procedure, and that some of the procedures suggested imply a radical departure from tried and proven public housing policies.

We have pointed out the lack of coördination and often of efficiency among the many groups making up the building industry, emphasizing the fact that many of the defects are due to the lag of tradition and that, because they have become so set, they can in normal times be changed only with great difficulty, but that with the retooling and technological readjustments which must inevitably follow the war, many of the difficulties could and should be eliminated; that these readjustments together with new materials and building techniques developed in the war effort hold promise for both economies and improvements in low-cost housing —promises upon which we must be sure to seize.

Also, we have pointed out the drag of obsolete building codes and the principles on which they should be revised, and the relation of inherited inflated land values to low-cost housing and need of revised methods of taxation as an aid in a return to normal values.

Having pointed out that the proper design of housing involves the design of the neighborhood environment, we further point out that the designer is restricted by certain conditions inherent in each program, and that every effort should be made to avoid unnecessary restrictions. We cite instances in the United States to show how that far-reaching has been the influence of regulatory restrictions, implicit as well as explicit, and the unfortunate effect of some of these; to further demonstrate this point we have suggested how more efficient and wholesome living might be made possible at no increase in cost by the elimination

of certain restrictions and by more scientific designing of both buildings and sites.

Finally we point out that on the shoulders of direction and management may rest the success or failure of attaining what we maintain should be the ultimate goal of public housing, namely to produce wholesome environments in which there will generate public spirited and loyal citizens who, as families and as neighborhood groups, will contribute to raising the general standard of our citizenship, which is the very substance of the nation.

*Conclusions.*

What of the future of housing? The future is sometimes mirrored and more often forecast in the past, not only in the experience in our own country, but in that of other countries.

Looking at our past, there can be little doubt that it was the intention of the "founding fathers" to bring the blessings of the Constitution within the reach of all citizens, as later implied in Lincoln's insistence on a government of, by, and for the people. How this original idea gradually lost its emphasis is told by Professor Ralph Gabriel in his interesting book, "The Course of American Democratic Thought", in which is traced the change of emphasis which became more marked with the extensive industrial expansion, especially in the period following the Civil War; how it culminated in "The Gospel of Wealth", as expounded and exemplified by Andrew Carnegie, wherein the emphasis was placed on the desirability of accumulating large fortunes, recognizing as a proper care of the wealthy the resultant dependency of the many.

Then early in this century came William Jennings Bryan's attack on "malefactors of great wealth", countered by McKinley's "full dinner pail", and followed by Theodore Roosevelt's "Square Deal". In the late 20's came Herbert Hoover's gospel of the abolition of poverty through abundance of production—"a chicken in every pot and two cars in every garage." In the 30's came the "New Deal". Whether or not we are in sympathy with these ideas, it would seem that we must recognize in them a progressive effort to recapture those earlier standards of equal opportunity for all. Since the effort is backed by a large part of the population, possibly a majority, and is endorsed by not only the Democratic party but in the main by some outstanding leaders of the Republican party, it does not seem likely that the trend will change, even though the methods of achievement may. The final establishment, within the last century, of universal education at public expense and against long-sustained opposition affords another historic mirror.

Now for the mirror furnished by other countries. There is significance in Wendell Willkie's report that in all the countries reviewed in "One World", he found a veritable ferment of new social aspirations. Probably few will challenge the statement that backward civilizations are characterized by a segregation of advantages by upper classes; and conversely, that an advanced civilization may be gauged by the extent to which its advantages have been disseminated throughout the entire population. The movement for a supply of good housing for all classes of the population is, though limited to certain countries, an outstanding contribution to modern civilization—comparable to the movement for universal education. It is a movement in which we in the United States have made but a tardy start, though there is good promise that, once the public is aware of its full significance, we shall move forward at a rate which will bring us abreast of the best.

Let us look at a specific country. We have seen how the movement for better housing started in England a century ago, came to almost complete realization not only in England but in Holland, and has spread through western civilization. Today England has under consideration the Beveridge and the Uthwatt reports, setting forth, if not entirely new concepts, at least great advances in existing concepts for social security and for land control. If the conservative government of England can do that, is it likely that we in America are going to be content with our old ways? Even the competition between nations would seem to require the discarding of the out-moded methods of laissez-faire. But a better index than that is found here at home in the recent proposal for municipal ownership of land, to be acquired with the aid of federal subsidies, a proposal advanced by some of the most conservative groups.

We here repeat the need of broadening the base of our housing policy, so that within the reach of all families of low income there shall be well organized projects arranged both for those whose rents must be subsidized and also for those who can pay normal rents. We repeat that local authorities already have the legal authority to broaden their policy appreciably, but that for the inclusion of certain income groups government aided coöperative or mutual ownership housing is clearly indicated, to make which feasible there is need of legislation by the several states, and that to administer such legislation and to coordinate the housing activities within each state (a thing which is now becoming urgent as the industries disrupted by the war effort attempt to swing back to normal) there will be need of State Housing Authorities, and that steps to this end should be taken immediately.

More important than the broadening of the policy of the local authorities and of establishing state authorities is the broadening of the base of the national policy. The base must be so broad that there are no gaps in which wholesome housing is lacking; the policy must be such as to assure consistency in the procedure by all agencies, and above all it must be socially constructive throughout. To establish such policies requires a study of the problem in all its social and economic aspects. To this end there is need of a Federal Housing Council, such as we have outlined. Following the deliberations of such a council we can hope that in the not too distant future all our people, whether in the city or country,

may live in such environments as will be conducive to wholesome effective living and establish our citizenship on a new high level.

Finally, the major permanent issue now facing this country and probably all countries is that of raising the general standard of citizenship, bringing the standard of civilization as a whole to a higher level. There are two major methods of accomplishing such a change, one through a system of public schools at all levels, the other through improved home environment—an almost utterly neglected but fundamentally important phase of education. In this country we have had a system of public grade schools for over a century, and during that time opportunities for higher education have extended greatly—all at a cost of probably well over half the taxes raised by local communities. No one, least of all the educators, would claim that this system works perfectly or has reached its ultimate goal. On the other hand we have made but a belated start at ridding the nation of the demoralizing and vicious influence of the overcrowded and unsanitary home environment in which approximately one-third of our citizens are born and reared and live the greater part of their lives. Thus this specific task of improving the home environment faces us as a major task, we believe *the* major task, one worthy of our united and concerted action. The measure of any nation is the quality of its citizens.

# APPENDIX A.

# A REVIEW AND APPRAISAL OF ACCOMPLISHMENTS OF VARIOUS FEDERAL HOUSING AGENCIES

## Highlights and a Summary of Accomplishments

As we have previously noted, for well over a decade now the production of an adequate supply of good low-cost housing has been a matter of concern to the Federal Government. In 1929 President Hoover outlined a Conference on Home Building and Home Ownership and assembled it in 1931. Encouragement was given to home ownership by people of modest incomes and, more significantly, encouragement was given to clearing out slums and erecting good housing, to be financed by limited dividend corporations. Extensive research was conducted, and recorded in a series of excellent reports.[1] Coming in the depths of the depression, the quantitative results were not great, but it put low-cost housing on the front page. It also brought about the Federal Home Loan Bank Board (FHLBB), out of which, in the Roosevelt administration, grew the modernization phases of the Federal Housing Administration and within which developed the several subsidiary agencies for financing small homes, to be described a little later.

The shortage of housing for people of low incomes, which had resulted in a large proportion of the families of the nation having to live in inadequate and often indecent housing and in slum environments, was the problem to which President Hoover's conference gave recognition and on which research was carried forward by its able committees. The urgency of remedial measures was recognized, but the methods offered for improvement of the situation were based primarily on private initiative and enterprise and on a considerable initial investment of private capital. While the quantity of housing produced was slight in proportion to the need, the encouragement was in the right general direction and stimulated a public interest.

In countries where low-cost housing has for long been a problem recognized by the government, it has been the general experience, as we have seen in detail in the sections on housing in foreign countries, that the first remedial efforts have been made through private capital alone. But to produce a supply of new housing for those who need it most, it has ultimately been found necessary for government to assist in making funds available on easier terms than private financing has succeeded in offering when acting solely on its own initiative. It has also later been found necessary to advance some type of government subsidy for families of very low income. American experience has followed this same pattern: (a) through agencies for aiding the *private financing* of housing, and (b) through agencies for aiding the *public financing and subsidizing of housing.*

In establishing agencies for the encouragement of the building of low-cost housing by private enterprise and by government subsidies, there was, probably of necessity in the early years, considerable experimenting in different methods of financing and production of dwellings for the different groups of the population to be served. While the agencies originally set up have for the most part been discontinued (with the notable exception of the Reconstruction Finance Corporation), the experiments furnished experience which deserves to be recorded, appraised and kept in sight as we plan our future housing developments. Some of these agencies have been dropped because the emergencies which they were planned to meet have ceased to be so acute—as in the areas of closed-down mines—but it is not improbable that similar conditions may reoccur in the post-war period ahead of us; others have served as steps in the evolution of present methods, as did the PWA projects. If a review of this record will serve to remind us that evolution (which in ordinary human activities comes largely from the experience gained in the process of trial and error) is a continuing process and that there is always room for improvement and adjustment, then for that alone the review should be of value. In the interest of clarity we first present only the highlights of the accomplishments, to be followed by a more detailed account.

A sound basis for improving the rural housing situation was established in the Department of Agriculture as far back as 1916, as part of a program to encourage better farm economy. But not until 1933 were agencies set up for the specific purpose of establishing a supply of adequate housing in *all* communities, urban as well as rural. The record of these various housing agencies which have operated in the Roosevelt administration makes it evident that up to the time the war clouds loomed on the horizon we had gotten off to a good start in organizing the work of supplying good housing for a number of low and relatively low income groups, both through private enterprise and public subsidy, in both urban and rural areas. The diverse fields of activities of these agencies is indicated in Table II, p. 34, and their accomplishments in Table IV, p. 37.

There are other constructive activities and accomplishments within the field of housing not included in Table IV A, p. 37, notably, the major activities of the Home Owners Loan Corporation, enabling owners to retain the ownership of their homes, which otherwise might have been taken from them through foreclosures. The number of these was about 640,000. Included under HOLC in the Table, are only those dwellings which were *improved* by HOLC after foreclosure. Nor does the table include the accomplishment resulting from the encouragement of the extension of mutual building loan societies by the Federal Savings and Loan System—not included because we have no way of knowing what proportion of the increase might have resulted without FS&LS. Nor do we include the new or improved rural

[1] The complete work of the Conference is recorded in "President's Conference on Home Building and Home Ownership", John M. Greis and James Ford, editors, National Capitol Press, Washington, D. C., 1932, 12 vols.

houses produced prior to 1933 by the Department of Agriculture.

The figures indicate only the physical gains, but with them have come those social gains which are the real objective of publicly aided housing. Thus with the urban subsidized housing has come the demolition of slum buildings, the number being about equal to the new houses. The same is true to a large extent of the housing in the rural areas, even of that not subsidized. Since no record has been kept of the type of housing of these hundreds of thousands of families aided through the agencies in the Department of Agriculture, we can only surmise as to what proportion was formerly living in definitely unwholesome conditions and what proportion in merely inefficient frugality; but in both cases the gains are great, not only in economies, both for the individual and for the nation, but in improved living and in citizenship.

Of the accomplishments in the urban field of private enterprise, those aided by the Reconstruction Finance Corporation (RFC), the Federal Housing Administration (FHA), and under the Federal Home Loan Bank System (FHLBS), we have no way of determining the type of housing formerly occupied by those going into the new or renovated houses, or of stating quantitative results. Of the 2,460,000 dwellings modernized through FHA loans (up to Sept. 30, 1940), possibly some proportion formerly approximated slum conditions; certainly an appreciable proportion were definitely sub-standard. Again we do not know how many of the 22,000 home loans insured for not over $2500 were for families formerly occupying definitely sub-standard housing, but few families from the real slums could have made the investment. The same is true in larger degree of the 510,000 more prosperous families able to purchase homes on monthly installments ranging roughly from $30 to $55 and more, to many of whom good housing has been made possible only through FHA loan insurance. *See Graph IX, area "F" p. 142.* Also the Greenbelt towns were not for those who had been living in sub-standard housing. Such housing, however, represents important gains to the families living in them, both in economies and in social morale. Of the 640,000 families helped to debt-free ownership of their houses by the Home Owners Loan Corporation (HOLC), we again have no measure of actual contribution to housing, but there is no question of gains in social and financial security. However, the 77,229 properties modernized by HOLC after foreclosure do represent a definite gain in housing.

The economic gain to the nation through stimulating the building industry was worth while, and of outstanding importance, not yet generally recognized, is the fundamental improvement in the financial structure of all classes of institutions lending money on building mortgages.

The normal procedure of these agencies was interrupted early in the summer of 1939 by the formation of the Division of Defense Housing Coordination as part of the policy of total defense against the threat of war. Priorities on building material and labor were inaugurated and gradually increased until by the end of 1941 all building not definitely a part of the war program had ceased. An analysis of the accomplishments up to that time is given in Table IV A, (*p. 37*) showing that through the activities of federal agencies about four and one-half million family units had by the end of 1941 been added to those already available. In February 1942 all federal non-farm agencies were consolidated in NHA as a purely war housing organization. During the following two years, under NHA, there were built an additional 1,627, 290 family units of which 884,000 are permanent, 72,000 demountable, and 671,290 definitely temporary.[2] Of the permanent units 700,920 were privately financed. In addition approximately 1,900,000 old units were made at least temporarily available, making a total of about 2,500, 000 temporary units.

The contribution to permanent housing by the Defense and the War Housing programs has been considerable. Up to June 19, 1944, in the urban areas that produced by private and by public financing was about 1,237,000 family units of which about 60 per cent seem to have been privately financed.[3] In addition to this, as of June 30, 1940, there were programmed 1,840,000 more. Of these, 806,788 of all types were publicly financed and, if family units are in about the same proportion as those completed, we have here about 707,800 more. This, added to some 493,000 completed, makes a total of about 1,200,000 family units produced by War and Defense Housing.

All this has been accomplished with comparatively little cost to the general public. The agencies aiding in the field of private enterprise have either loaned, at low interest rates, capital which is to be returned, or they have merely insured the loans made by private enterprise. In general, through fees collected for their services and through other incidental transactions (*e.g.*, the resale of foreclosed properties in the case of HOLC) they have operated or are now operating at no expense to the government. Even in the field of subsidized housing the expenditure by the government has been slight compared to many other undertakings of no more importance which most of us take for granted. (*See Graph I, p. 50*).

In addition to the previously mentioned agencies are a number of others which function as liaison or intermediate agents between those federal agencies dealing directly with the building public and the private lending organizations which are insured by the federal agencies. These are now under the Federal Home Loan Bank Administration, as shown in Table II, p. 34. The original function of the Home Owners Loan Corporation ceased in 1939, since which time its activity has been

[2] Data in letter from NHA, Aug. 29, 1944.

[3] The total is the sum of the first item in the second column of Table IV, B and the urban items in the first column of Table IV, A. (*i.e.*, less army, navy, and rural). The privately financed is the first item in the first column of Table IV, B.

in liquidating and administering the properties which it took over through foreclosure.

How soon, under the present stress, we may hope for a complete coordination of the rural and urban programs and an overall long range peace-time program, such as we elsewhere suggest (*see p. 48*) is in the lap of the gods. In preparing that program it would seem wise to review in more detail the methods and policies pursued in all the previous work. Such a review, in its broader aspects, is made in the following section. In some of these agencies are certain details of policies which have affected the design of the buildings, grouping of buildings and the use of the land which we have already discussed in the chapter on Design.

## Policies and Accomplishments of the Several Agencies

*The Procedure in This Study.*

In the broader study which must be made for housing in the post-war period, it seems desirable to review and reappraise the methods used up to the present, not overlooking those experiments of the years of the financial depression in the early 1930's, even though some of them were of short duration and some of the agencies have been superseded by other agencies. In the appraisal of accomplishments which follows, various federal housing agencies are reviewed in groups, not in order of their importance, but roughly in the order of their appearance. First we consider those operating directly within urban areas: RFC, which organized a system of direct loans; next FHA, which insured loans; and then the agencies insuring home loan societies through the Federal Home Loan Bank Board; following these are the lending agencies which have operated in the rural areas; then the agencies offering subsidies, leading up to and including USHA and FPHA; finally the Defense Housing. In conclusion we shall comment on points of conflict between certain of these agencies, and on various efforts at coordination.

Such a review and appraisal involves figures and statistics, which in themselves are dull reading, but their significance is often dramatic and we have endeavored so to present the figures that their significance will be apparent. In some cases the data given are the last that were available before the world cataclysm caused a cessation of normal activities; in other cases the data were brought up to a later date—when the activity has some special significance, such as some of the Defense Housing.

### Non-Subsidizing Agencies:

*The Reconstruction Finance Corporation.*

Under the Emergency Relief and Construction Act of 1932 under the Hoover administration, the Reconstruction Finance Corporation was authorized to make provision for loans to corporations formed wholly for the purpose of providing housing for families of low income, or for the rehabilitation of slum areas. Ten year loans were available to: (a) corporations which were self-liquidating in character; (b) projects approved by the "local regulatory authority" of which none existed at the time, though the New York State Housing Law was cited for helpful legislative suggestions.[4] Aside from the non-existence of housing authorities, an obvious weakness here was in the short amortization period. Under the simplest procedure, to retire the loan in 10 years meant adding to the annual rent an amount equal to one-tenth of the total loan, for the first ten years. By the same reasoning, it might have implied thereafter reducing the rent by a proportional amount—but there seems to have been no such stipulation.

Of the many applications filed with the RFC only one project met the requirements and was actually built —Knickerbocker Village in New York in 1933, with a loan of $8,000,000 originally at 5 per cent, later reduced to 4 per cent.[5] It occupies an entire city block in the lower east side on land valued at $2,000,000, or $13 per square foot, total cost $9,500,000. The buildings themselves are exempt from city taxes. The 6,030 rooms rented at from $11 to $12.75, an average of $12.50 per room or $50 per month for each of the 1593 family units. Although several slum blocks were cleared, most of the slum population, lacking the needed income, could not come back, nor did the twelve-story structure serve as a model for good lighting of the apartments on the lower floors, nor improve the lighting of the surrounding housing. *Plate XL A, p. 170.* Probably the best lesson learned from this is the necessity for long periods of amortization, which would have resulted in appreciably lower rents.

*The Federal Housing Administration (FHA).*

FHA was organized to meet specific needs, as expressed in the Act creating it: "To encourage improvement in housing standards and conditions; to provide a system of mutual mortgage insurance and for other purposes".[6] A broad objective stated in broad terms, which in essence means: the improvement of existing housing conditions and housing standards, by means of a system of insured building mortgage loans.

In the past, the houses built for occupancy by those in the lower income groups who could afford to rent or buy new houses have very generally been of poor construction and of poor design, built cheaply and in quantity, for speculation rather than investment. With such houses conscientious builders could not compete in price. Those are the standards upon which FHA was to improve.

Also in the past, generally speaking, loans made for building purposes were costly. Commonly there was a first mortgage for something like half the value of the building and land, to be redeemed in a relatively

[4] Circular 110-3, Reconstruction Finance Corporation, Government Printing Office, August 1932. p. 2.

[5] "Urban Blight and Slums", Mabel L. Walker, Cambridge, Harvard Press, 1938, p. 318–319.

[6] "National Housing Act as Amended". U. S. Gov't. Printing Office, Washington, D. C., September 1941, p. 1.

short term of years, or "at call", bearing interest at 6 per cent or more. If the builder needed to borrow a larger proportion of the capital, there was a second and even a third mortgage loan, each at a higher rate of interest than its predecessor, with a shorter redemption period and with a higher service charge. As a result of this procedure it was not unusual for the total interest on all loans to average 10 per cent and upward, plus service fees of 10 per cent and upward—and, to cap the climax, often the service fees were deducted from the loan, while the interest rate was on the loan before the deduction—that is to say, the money received might be only 90 per cent of the nominal loan, while the interest was on 100 per cent of it. The mutual building savings and loan associations did better than that, but still their terms were appreciably higher than those made possible by FHA insurance.

These higher charges were necessary, it was claimed, to give the lender a back-log of security or insurance against depressions, when rents are low and not always collectable. The borrower had no similar insurance against rainy days and hard times. Since a system of gradual reduction or amortization of mortgage loans was not in general practice, the result was that as neighborhood deterioration advanced, the loans on properties in such neighborhoods lacked adequate security. The weakness of this situation became glaringly apparent during the depression—a cause of serious and oft-times disastrous trouble to the lending agencies because of the numerous foreclosures.

It was to meet this situation that the National Housing Act of June 27, 1934, provided for the permanent organization of the Federal Housing Administration (FHA). Its method of carrying out the objectives of the Act is to insure existing financial institutions on their mortgage loans for the renovation of old housing and the erection of new houses, but for only those income groups which can pay their own way, either as owners or renters. Other objectives of the Act were the improvement of housing "conditions", and "other purposes".[7] There was, at the time the Act was passed, a shortage of good houses at low-cost, also a slack in building operations, resulting in unemployment in the building trades and in the plants producing building material. So these "other objectives" were commonly understood to be an increase in employment by stimulating building.

Title I of the Act was originally intended solely to encourage the renovation of old buildings, a temporary emergency measure running first to January 1936, but extended from time to time. Under this title the Modernization Credit plan was established to provide for private unsecured credit in amounts up to $2000 for any one building, including but not limited to residences. In September 1939, also under Title I, in Class 3, insurance was made available for loans up to $2500 on small *new houses*, primarily for the benefit of the rural areas. Title II provided for the insurance of loans up to $16,000 on single private houses and on groups of houses up to $8,000,000, which in 1941 was reduced to $4,000,000.

Title III provided for the establishment of national mortgage associations as the agencies to make the loans to be insured under Title II.

Title IV created the Federal Savings and Loan Insurance Corporation to insure the accounts of institutions eligible for loan insurance, with the Board of the Federal Home Loan Bank acting as the Board of Trustees. Title V amended the Federal Home Loan Bank Act, the Farm Credit Act, the Home Owners Loan Act, the Agricultural Adjustment Act, and the Interstate Commerce Act, so as to facilitate coöperation between these agencies and FHA and other agencies aiding in low-cost housing. The Act has been further amended in details from time to time, in the general direction of a liberalization of policies. Title VI went into operation in April 1941. Primarily for the benefit of Defense Housing, it provides for the insurance of loans of $4000 on a single house, $6000 on two-family houses, $8000 on a three-family house and $10,500 on a four-family house, the loans being for 90 per cent of the value of the completed property and for 20 years. In 1942 an increase in the amount of loans was authorized and the period extended to 25 years.

For their FHA insurance, mortgage lending agencies pay an annual fee which may not legally exceed 1 per cent (actually $\frac{1}{2}$ per cent), which is charged at cost to those who borrow from the agencies. For new small owner-occupied houses, FHA was able at the start to reduce from the previous high interest rates (of from 6 to 15 per cent) down to 5 and $5\frac{1}{2}$ per cent; was able to increase the amount of the loan from 50 or 60 per cent to 90 per cent, payable in monthly installments, and to extend the period of the loan from a relatively few years to 25 years. On larger single houses, up to $20,000 in value, loans of 80 per cent were made for periods up to 21 years. On group houses costing up to $5,000,000 the loans were made available for 80 per cent of the value, with such a period of amortization as the administration might approve according to varying circumstances. Under Title I the insurance of unsecured loans offered similar new opportunities for economical financing of renovated and modernized housing. The service charges for arranging the mortgages was reduced from the often extortionate charges formerly prevailing to a small fraction of 1 per cent.

In order to extend the foregoing opportunities to a greater number of people, in 1939 an Amendment to the National Housing Act made possible an increase in the allowable outstanding mortgage insurance held at any one time—an increase from 3 billion to 4 billion dollars; it allowed other changes facilitating the general activities, and at the same time the maximum interest rate chargeable by lending institutions insured by FHA was reduced from 5 per cent to $4\frac{1}{2}$ per cent for small scale projects costing not over $100,000. This, with $\frac{1}{2}$

[7] "National Housing Act as Amended", FHA 1940, U. S. Gov't. Printing Office, Washington, D. C.

per cent for insurance, brought the total annual charge to 5 per cent. On large-scale projects the interest rate was reduced to not over 4 per cent, or with the insurance to not over 4½ per cent. Early in 1938 the service charge was eliminated on Title II loans, but it was retained on loans for new small houses under Title I, Class 3.

In quantitative terms, that is to say in terms of housing made more livable through modernization and through new housing, the improved financing by FHA resulted in some of the hoped for accomplishments. Under Title I, the modernization work got under way quickly and by the end of 1934, after five months of operation, had increased employment as measured by $171,000,000 worth of contracts, averaging $634 each.[8] The last peace-time figures were for September 30, 1940, and showed that in the urban areas aside from 22,000 new Class 3 dwellings, loans had been made for improving some 2,469,000 single family dwellings, 332,000 dwellings for two or more families, and in the rural areas for 139,000 homes or other structures on the farm—the total of the loans being for over 1.5 billion dollars, distributed among upwards of 6000 lending institutions.[9]

In loans for new homes, under Title II, results did not begin to show until 1936. This was because loans could not be insured until the Mutual Mortgage Association had been established and made legal in the various states. Up to December 31, 1940, under Section 203, mortgages had been insured on one to four family buildings numbering 634,023, for over 2.7 billions of dollars; under Section 207 provision had been made for 3,700 families in 315 group projects completed or under construction and in 43 more projects for which mortgage insurance had been accepted, the loans amounting to nearly 150 million dollars.[10]

Title VI, Section 603, primarily an aid to Defense Housing, was not organized until April 1941. Loans for 104,105 units had been insured up to July 1942,[11] at which time an amendment to the Act increased the authorized loans from $500,000,000 to $800,000,000. (In 1943 the figure was advanced to $1,200,000,000.) Section 608 was added making mortgage insurance available for war housing projects up to $5,000,000. Title VI mortgage insurance was made available for all types of construction for all one- to four-family structures permissible under the $6,000 limitation of the War Production Board. Under Section 608, 14,688 units had been started, mostly in areas of expanding war time industries.[12]

The total of new dwelling units insured by FHA from January, 1941 to January, 1944 were 137,841, of which 122,488 were under Title VI, Section 603, and 14,668 were under Section 608.[13]

In the insurance of loans for apartment houses, which was an active field in the pre-war period, there were no regulations to prevent speculative builders from borrowing with the hope of a quick sale—after filling the building with tenants at rents apparently profitable, but actually not so. The hope of such a sale would be more of an inducement to cutting corners than to putting into the building those things which make for economical operation and maintenance. We present no data as to the extent or even the existence of such practices, but the foreclosure of 14 out of 344 projects,[14] in a period of at least normal real estate activities, suggests the presence of the speculative operator. However, in FHA's entire field of operation "foreclosures have been very few", observes the United States Savings and Loan League; but it further observes that foreclosures might become more serious in a period of inflation. Incidentally the League is opposed to the continuance of FHA.[15] On the dangers of inflation we invite attention to the remarks of Mr. Alexander Fahey, quoted on p. 233.

It must be kept in mind that FHA was devised principally as an aid to home ownership by those families of modest incomes who had been able to set aside something toward the cost of the future home. From the start, through 1940, the typical income was about $2500, but the average monthly payment had declined from $37.44 in 1936 to $26.59 in 1940. A little over 8 per cent of private homes has been for families with incomes less than $1500, most of whom borrowed to modernize an existing dwelling. In some small towns such an income might represent comparative opulence, while for a large family in the largest urban areas it might be a truly low income. Less than 3 per cent of FHA home purchasers had incomes over $7000.[16] The proportion of families with various incomes is roughly shown in Graph IX, "Homes—New". The proportion paying various rents is shown in the same graph under "Multi-family Houses". *See p. 142.*

In the field of rentals, FHA has served more prosperous groups—those who can pay rents from $30 to $80 and more, average rents being about $54.[17] The proportion in the various income groups is shown in Graph IX. There were, however, at the end of 1940, but 39,000 such family units built, which represents a small

[8] Stewart McDonald in "Housing Officials Year Book", NAHO, 1936, p. 10.

[9] Figures in this paragraph as of Sept. 30, 1940, are derived from data from a letter from Ass't Administrator Robert B. Smith, dated October 16, 1940.

[10] Abner Ferguson, Administrator, in "Housing Officials Year Book", National Association of Housing Officials, Chicago, 1941, p. 246; and letter of R. B. Smith, July 1942.

[11, 12] Abner Ferguson, Commissioner, in "Housing Yearbook," NAHO, 1942, p. 23.

[13] Abner Ferguson, "NAHO Year Book", 1944, pp. 58 and 47.

[14] For list see Architectural Forum, Sept. 1940, p. 210–212.

[15] United States Savings and Loan League, Committee on Housing, in NAHO Year Book, 1942, *op.cit.*, p. 121–122.

[16] Eighth Annual Report, Federal Housing Administration, Abner H. Ferguson, Commissioner, Washington, 1940, pp. 77 and 78.

[17] For more precise details see Tables and Charts in the Annual Reports of the Federal Housing Administration, for the years 1940 and 1941.

proportion of all FHA operations, as shown in Table IV, p. 37.

While the foregoing is an encouraging record in home building, possibly more important than this is its influence on the national economy. For aside from temporarily giving employment to large numbers and stimulating the building industry, it aided permanently in putting the mortgage business on a sound basis, in materially reducing the speculative element of the mortgage investment business, with all its ramifications in home owning and renting and in the real estate investments of insurance companies, banks and many other financial institutions, of which we will have more to say a little later in connection with the accomplishments of FHLBB.

All of FHA's contributions to low-cost housing have, in the long run, been accomplished at no expense to the government. During the first five fiscal years of operation the excess of expenditures over income was about 22 million dollars, or slightly over 1 per cent of the loans insured. This loss was due in part to the fact that in the first half of that period about half of the insurance was for modernization, which then produced no revenue to the administration, and did not until the Act was amended in June 1939. At the end of 1939 there was a substantial excess of revenues over expenses, and by the end of 1941 the cumulative income was $768,484 in excess of the cumulative expenses.[18, 19] As of January 1944, the excess of income over operation expenses amounted to $13, 753, 310.[20] The income is from appraisal fees, premium payments, repayments and reinvestments. This excess income is going into reserves for insurance and other funds.

To sum up, by bringing about the adoption of a policy of covering the entire financing of building operations with a single mortgage instead of several, by monthly collection of the payments of both interest and capital reduction, together with other costs such as taxes and insurance, by materially extending the length of the loan, with consequent smaller periodic payments to retire the loan, by mutual insurance of the building loans of mortgage lending institutions all over the country, by exacting from the insured lending institutions uniform standards of sound construction, standards of good design and even of neighborhood requirements, by all of these means FHA has been able to raise housing standards, as we have pointed out in the chapter on Design, has been able to reduce the costs of financing by reducing the risk and has been able to add to the supply of economical homes, and in so doing decrease the unemployment in the building industry, provide investment for the capital and improve the entire system of mortgage financing.

FHA accomplished its results by drawing into the field of low-cost housing the vast funds of national and state banks, mortgage companies, insurance companies, and to a much less extent the funds of savings and loan institutions and savings banks—a total of some 8000 institutions. Viewed from the angle of financial resources tapped, this is in strong contrast to the operations of the Federal Home Loan Bank System, FHLBS (to be discussed presently), which operates for the encouragement and strengthening of home loan and savings institutions, and whose original and distinctive function was the promotion of that thrift which produces the equity of the prospective home owner and makes it possible for him to borrow the balance of the funds needed for his home. Both FHA and FHLBS encourage home building, the emphasis by FHA being on investment by large and prosperous institutions, the emphasis by FHLBS being for the encouragement of thrift; but the fundamental difference led to two very different types of administration, and as the Committee on Housing of the Twentieth Century Fund points out, to a spirit of rivalry and some conflicts between the two.[21] Departmental rivalries are a curse of government at all levels, but such rivalries are more apt to be a reflection on human nature than on the merits of either rival agency.

Beyond these actual accomplishments, FHA looks to another field for future action: The blighted urban areas which we have discussed in the chapter on Urban Rehabilitation.

A high altitude reconnaissance over the domain of low-cost housing shows yet another neglected area which possibly might be within the jurisdiction of FHA: the field of coöperative or mutual housing, which lies between the field which had been cultivated by FHA and by USHA. *See Graph IX, p. 142.* In certain countries of northern Europe, as we have seen, much of the low-cost housing has been done through coöperatives, for which, through government agencies, the interest rates were lower than those of FHA and a smaller equity was required of the owners, one more nearly in line with the rates of the Farm Security Administration and of the New York State Housing Authority. We have already discussed this question in the section on the Family Income and Budgets, and will return to it in reviewing the work of USHA. The move made in the field of mutual housing by the Office of Defense Housing (now under FPHA) is of value but not a fair test, since it came in a period of abnormal conditions. As we have pointed out in discussing a Postwar Housing Program, p. 48, cooperative housing would logically fall under the jurisdiction of FHA—under a new title to provide lower interest rates and a longer period of amortization than

[18] The data in this paragraph are computed from data in a letter of October 23, 1942, from the Commissioner, and is for the *calendar* year.

[19] Data similar to the foregoing, but based on the *fiscal* year is found in an Analysis of FHA Financial Operations, by the Committee on Housing, U. S. Savings and Loan League, 221 N. LaSalle St., Chicago, 1941, Table I.

[20] Abner Ferguson, "NAHO Year Book," 1944, p. 49.

[21] "American Housing", The Twentieth Century Fund, New York, 1944, p. 269–272.

offered to the heretofore less stable and permanent projects produced by operative builders.

Yet another field of FHA activity has been suggested. To make it possible for the smaller banks, insurance and financial institutions to invest their funds in building loans without too great risk, the Postwar Committee of the Producers' Council has suggested "Yield Insurance".[21a] In essence the suggestion is that the financial institutions, large and small, be permitted to make direct investments in housing projects with dividends limited to 5 per cent; that these investments be insured as to a minimum yield of $2\frac{1}{2}$, 3 or $3\frac{1}{2}$ per cent, and that FHA become the insurer, under an amendment of the national housing act. As we see it, the fundamental weakness of the suggestion is that to insure a return on the investment is to insure the efficiency of the entire building operation and also the subsequent management—the government sharing in the risk but not the profit. The only justification which we can conceive for the government taking such a risk would be the production of housing for low income groups at lower costs than by other available financing. But FHA has been insuring loans at 5%, with negligible risk to the government. To set up the elaborate nationwide bureaus necessary for the thorough supervision of construction and management of housing projects would entail expenses far greater than the expense of FHA in administering mutual insurance of loans at 5% or less.[21b] If this field of investment is of sufficient importance to the interested financial institutions, the answer might possibly be found in a system of mutual insurance *administered* by FHA, but with the risk to be covered by a fund raised or guaranteed by those insured. The expense of supervision which the operation of such a system would entail might possibly make it necessary to limit dividends to less than 5 per cent.

The more recent supposition that FHA insure loans for rehabilitated houses to be purchased by homeowners is subject to the same criticism as Field Insurance. Also it could not be constructive unless each house were in a rehabilitated neighborhood.[21c]

The future holds many possibilities for the expansion of the activities of FHA, if it can manage to bring about a reduction of interest rates and extend the period of amortization.

### *The Federal Home Loan Bank Administration and its Subsidiaries*

#### *The Federal Home Loan Bank*

The Federal Home Loan Bank Board (FHLBB) is the central organization of finance for those federal housing agencies operating in the urban areas which made loans to private building enterprises or insured loans to them. It was established by Congress in an Act passed in 1932, under the Hoover administration, and amended in 1933 and 1934, with provisions for most of the agencies later described. Under the organization of NHA (1942) it became an "Administration" instead of a "Board". Mr. Fahey, when "Chairman" of the Board (now the "Administrator") tells us that in the early critical years it "was charged with the immediate responsibility of salvaging hundreds of thousands of distressed citizens faced with the loss of their homes, stabilizing a demoralized real estate market and bringing order to the home-financing field. Its permanent responsibility, however, was to provide American home seekers with the facilities for financing homes on an economical basis and to establish additional safeguards for investments in homes; to provide home-financing institutions with a credit reservoir which would best enable them to achieve their purpose, and to extend their services to every section of the country—in general to establish a sound financial structure so as better to house the nation's families of small and moderate means."[22]

To carry out its purpose four agencies were organized and, by the reorganization Act of 1939, were grouped under its management: the Federal Home Loan Bank System, which includes the Federal Savings and Loan System; the Federal Savings and Loan Insurance Corporation; the Home Owners Loan Corporation. Under the reorganization of February 1942, all these functions were included in the new administration.

In connection with Defense Housing, a special field force was created to encourage home financing and construction; and with the view to conserving essential materials, the Board encouraged owners of dwellings to convert and rehabilitate older single family dwellings into habitable multi-family dwellings, and offered the services of their technicians in working out such plans. Mr. Fahey reports that defense housing, together with public housing, in 1941 more than doubled its production (a total of 73,000 units), while private capital produced 400,000 units.[23] A more complete summary of the work of the board will follow the review of the work of its subsidiary agencies.

#### *The Home Owners Loan Corporation.*

The Home Owners Loan Corporation (HOLC) was established in 1933, under the Home Owners Loan Act of 1932, as a depression emergency measure to forestall foreclosures on mortgages of small homes. Up to June 1935, the close of the period of its activities in

[21a] "Toward a Postwar Housing Program", Postwar Housing Committee, Producers' Council, 815 Fifteenth St., N.W., Washington, D. C.

[21b] "Yield Insurance" is discussed by competent financiers in "Tomorrow's Town", Dec. 1944, National Committee on Housing, Inc., 572 Fifth Ave., New York 18, N. Y.

[21c] For a symposium on this subject by financiers and others see *Tomorrow's Town*, May, 1945, N.C.H., 512 Fifth Ave., New York 18, N. Y.

[22] "The Federal Home Loan Bank Board and Its Agencies", FHLBB, Washington, D. C., with data as of Jan. 1, 1940.

[23] In "Housing Yearbook" 1942, *op.cit.*, p. 40.

refinancing distressed mortgages, it had made loans on over a million homes, for amounts totaling $3,093,000,000. Subsequent advances and other additions brought this figure up to $3,468,583,773 by January 1942, at which time 40.4 per cent of that amount had been liquidated.[24]

Though the original amortization period was 15 years, by January 1942 as many as 125,000 of the original loans had been paid in full. On the other hand, up to the same date 185,833 properties or over 18.5 per cent had been taken over by foreclosure. To reduce the necessity of foreclosing, the Mead-Barry Act of 1939 authorized the extension of the period of amortization from 15 to 25 years. Of the borrowers taking advantage of this extension, and they included the most problematic cases, only a little over 3 per cent have made foreclosure necessary.[25]

It has been the policy of HOLC, after foreclosing properties, to renovate them, and to sell at attractive prices. In this way they have sold about 147,000 renovated houses and in 1942 still held title to 38,957. Yet as of January 1940, the properties which they had thus previously acquired and subsequently sold, together with the shrinkage on market values of those still owned, aggregated a loss on their books of about 6 per cent of the original $3,093,000,000; but this has been offset by the difference in the rate of interest on money borrowed and money lent, so that the operating costs have been met without cost to the U. S. Treasury. This general trend has continued. By January 1944 losses were but 2 per cent of total investments—as compared with 6 per cent in 1940.[26]

It was when the number of foreclosed homes on hand was up to about 77,000 that HOLC became interested in the rehabilitation of the blighted urban areas, where many of their holdings were located. How the research which HOLC carried on, first in the Waverly District of Baltimore and later in other cities, stimulated research into methods of coöperation in rehabilitation by city, state, and federal government is told in the chapter on Urban Rehabilitation.

In sum, HOLC has put some 600,000 families on their way to develop home ownership, and as a by-product has put some 147,000 renovated homes on the market, and has made important contribution to the research into the problem of urban rehabilitation.[27] *For the contribution to Defense and War Housing, see Table IV B, p. 37.*

*The Federal Home Loan Bank System.*

This bank system was established for the primary purpose of making available mortgage building loans for small homes in all parts of the nation, on terms which the borrower could readily meet and which would safeguard his interest, operating through thrift banks and building loan associations. Prior to its operation interest rates varied from between 6 per cent in the Northeast to 10 per cent in the South and West, and with no general sound practice as to amortization. Now interest rates are as low as 4½ per cent in the large cities of the Northeast and elsewhere are for the most part under 6 per cent; amortization is required, though the length of the period varies; the payments of amortization and interest are made monthly.[28] The standards and practices of the member institutions have very favorably influenced those other institutions which have not become members. Sound building construction has been insisted upon and good design encouraged. The result has been a substantial contribution to the general improvement in the standards for small homes. One means to this end has been the issuing of certificates of registration to homes built in pursuance of the approved standards, thus strengthening investment security and resale.

FHLBS functions as a credit reserve system through which member institutions encouraging thrift and home financing can obtain short or long term advances on approved home mortgage collateral. As of March 1942, there were 3850 members, including savings and loan associations, coöperative banks, homestead associations, insurance companies and mutual savings banks operating under state or national charters. Their assets amounted to more than $5,400,000,000, and they are served through 12 regional Federal Home Loan Bank Boards. There were about 3223 non-members savings and loan associations but the total of their assets were only about one-fourth those of the member associations.[29] Among these member institutions are 1450 Federal Savings and Loan Associations, chartered by the Federal Home Loan Bank Administration. They include both newly organized institutions and institutions converted from state charters.[29]

Funds for the System are obtained through stock subscription of its members, an initial subscription by the government, the deposits of members and the sale of debentures to the public. The accounts are insured in FS&LIC as described in the following paragraphs. The system is self-supporting.[29]

*The Federal Savings and Loan Insurance Corporation.*

This organization comes very close to many small home owners. Established in 1934 under the National Housing Act, it insures against losses in all Federal Savings and Loan Associations and other state chartered financial institutions approved by FHA for loan insurance up to $5000. The individual savers insured through them were about 2,400,000, of whom 98 per cent

[24] From data by John H. Fahey, Administrator FHLBA in "Housing Yearbook", 1942.

[25] *Ibid.* p. 45.

[26] John H. Fahey, in NAHO Housing Year Book, (*op.cit.*) 1944, p. 69.

[27] From data by John H. Fahey, Chairman, FHLBB, in "Housing Yearbook", 1940, NAHO, *op.cit.* p. 176-177.

[28] The figures in this paragraph are derived from a letter from the Federal Home Loan Bank Administration dated Aug. 31, 1942.

[29] Federal Home Loan Bank Administration, under the National Housing Agency, "Outline of Functions," March 1942.

have savings of less than $5000. No saver in these insured institutions have lost a cent. This is partly due to the fact that the Insurance Corporation has authority to avert default of an insured institution, which can be accomplished without disturbance to other local financial institutions. By January 1942 the number of member institutions had reached 2,340, (the bulk of the institutions in the United States able to qualify) representing capital assets of $3,360,000,000, and 3,110,000 private investors. In the seven and one-half years of operation the Corporation has rehabilitated 19 associations and saved the accounts of 6,403 insured shareholders, whose accounts totaled $4,352,529.[30]

Mr. Fahey, writing as chairman of the Board, assures us that "the bulk of Americans are no longer interested in fly-by-night speculation. They do not care to take a chance in hope of an excessive return. They insist on safety of their savings and are satisfied with a reasonable rate of dividend. The result is a steady accumulation of savings in long-term financing institutions at lower rates of return than formerly were possible. Consequently the government insured lending institutions can afford to lend money at lower interest rates. A growing proportion of the surplus earnings of the people is going into financing of homes, the basic wealth of the nation."[31] Total expenses of the Corporation in 1939 were $237,267, less than four per cent of its annual income. It is self-supporting.[32] Its present operating costs are covered entirely by the interest on the reserve fund alone. Income is derived from admission fees paid by newly insured associations, premium payments by all insured associations, and interest on invested capital and reserves. In normal times (1940) there was being added annually to the reserves about $5,500,000—an amount greater than the admission fees and premiums and the interest on the bonds representing the original capital of $100,000,000. Assets total $122,000,000. The potential liability of the Corporation at the present time is approximately $1,833,691,000.[33]

*Summary.*

All the agencies under the FHLBA, including several which we have not mentioned, each in its specialized field were designed to facilitate lending and thus aiding in the housing of families whose incomes, though modest, are more than enough for current expenses, enough to save and accumulate a little capital for investment in a home. Mr. Fahey writes, "Our people have clearly shown that they expect better planned and built homes than they have been able to buy or build on their limited means in the past. They want assurance of protection against speculative real estate ventures; against disorganized and extortionate financing. They want simpler, safer mortgage contracts, longer terms of payment and more reasonable interest rates than those which obtained before 1933."[34]

Writing at the close of 1939 Mr. Fahey makes this timely statement: "*It is too early to predict the effect of the war on the course of housing betterment in this country, yet it is obvious that with our credit resources, reinforced as never before through the Federal Reserve System, through the Farm Credit Administration, the Reconstruction Finance Corporation, the Federal Home Loan Bank System offering insurance of deposits and investments, plus the vigilance of the Security and Exchange Commission, our economic structure is far more able to withstand heavy shock than in 1914 and 1915, [the beginning of World War I]*" (*Italics are ours.*)[34]

From his observation post at the head of this system of home financing, Mr. Fahey makes the further interesting observation that the decline in residential construction did not set in until about the middle of 1941, when the shortage of critical materials became more acute; after that the loans made were largely for the purchase of existing homes. He adds that the rise in national income and wages did not result in an extraordinary increase in the savings of the associations, probably because of the increased purchase of consumer goods (in anticipation of scarcity), because of higher living costs, and of anticipated higher taxes.[35]

### Subsidized Housing in the Urban Areas:

*The PWA Housing Division*

In 1933 came the proposal that the federal government take the initiative in a national movement to make wholesome housing available to families with incomes too small to enable them, without subsidy, to have sanitary, wholesome, sunlit housing in the place of slum housing. The authorization was contained in the National Recovery Act of 1933, Title II, Sec. 202. To carry out this work a Housing Division was set up under the Public Works Administration in the Department of the Interior. As there were no local public housing authorities, the plan was to operate through local limited-dividend private housing corporations, under a certain amount of public control. To these corporations PWA would advance funds at 4 per cent for 85 per cent of the cost of the project, for amortization periods of from 25 to 35 years. A systematic plan of public education regarding low-cost housing was undertaken through a group of traveling lecturers. Over five hundred applications for funds were filed, but only seven finally met the requirements exacted by the Housing Division. There was a stumbling block in their path. When a local housing corporation started to acquire the large amount of land necessary for a well organized housing project the procedure was usually held up by exorbitantly high prices, based on former

[30] The Federal Home Loan Bank and Its Agencies, Washington, Jan., 1942.

[31] Housing Yearbook 1940, *op. cit.*, p. 175.

[32] Federal Home Loan Bank and Its Agencies, *op. cit.*, 1942.

[33] Federal Home Loan Bank and Its Agencies, *op.cit.*, 1940, p. 7, 8.

[34] Housing Yearbook, 1940, *op.cit.*, p. 167–168.

[35] Housing Yearbook 1942, *op. cit.*, p. 38–39.

speculative expectations. With this situation the Division could not cope for lack of the power of eminent domain, which is necessary to condemn the land. However, seven projects, housing 3059 families, were built and have been in successful operation. These are listed in Table III, p. 35. The Limited Dividend Program was discontinued in February 1934.[36]

*The PWA Housing Corporation.*

Meanwhile, to make possible the acquisition of land at something like reasonable prices, the United States Emergency Housing Corporation was created in October 1933, as an auxiliary to the Housing Division, with power of eminent domain and authorized to use PWA funds to acquire land and to build and operate housing projects. Under the policy adopted, while projects were undertaken only in response to local sponsorship, the planning and administration of construction were carried on from Washington; the projects were federally built and federally owned until taken over by local sponsors. By August of 1934 the Housing Corporation was organized and ready to initiate slum clearance and rehousing projects. There was a 30 per cent grant, but the remainder of the money used in financing was to be returned to the federal government through rents. More liberal terms were provided for under the Emergency Relief Appropriation Act of 1935—a 45 per cent grant, a 45 year amortization period for the cost of material and labor, and a 3 per cent ground rent was to be charged in lieu of amortization of the land. The grants were in effect a capital subsidy. Some kind of subsidy was necessary in order that rents might be low enough for the former slum dwellers. Left to the discretion of the administration were important policies which later had to be defined by an Act of Congress—the George Healy Amendment to the Emergency Relief Appropriation Act, passed in June 1936. Some of these amendments are significant: (a) in lieu of taxes for city services, a charge was to be paid by the federal government to the municipality—a charge based on the capacity of the tenants to pay rather than on the value of the properties; (b) the Administration could fix the rate of interest on capital invested and could regard as much as 45 per cent as a capital grant, the remaining 55 per cent to be paid in not more than 60 years. Under this program fifty federal projects, housing 21,776 families were completed and a number of them were operated by the corporation. *See Table III p. 35.* Most of them have now been sold or leased to the local housing authorities, and it is assumed that ultimately all will be so disposed of.[37]

An important objective was the reemployment of a large number of workers in the building trades on relief because of the depression; so PWA labor was required on the projects. Organized labor was unsympathetic to the employment of PWA labor; strikes and jurisdictional disputes slowed down the work and added to the costs. The local PWA was usually under the control of one political party and the opposing party claimed that preferences were being shown, particularly in the choice of tenants. To administer from Washington projects scattered over the nation proved cumbersome and costly, and the PWA labor was often inefficient. While this work was a step forward and the experience invaluable, the centralized administration was admittedly unsatisfactory and some change in policy was seen necessary.

*The United States Housing Authority (USHA).*

As a result of all the foregoing experiences and deliberations and of extended congressional discussions,[38] the United States Housing Act of 1937 (the Wagner-Steagle Act) was passed in March of that year. It supplements the National Housing Act of 1934 and provides for federal participation in housing on a basis largely new to this country, though the more fundamental principles had been established under the PWA program. It calls for the permanent establishment of a United States Housing Authority (USHA), authorized to advance funds on easy terms to local public housing authorities for slum clearance and rehousing, also to make direct grants and annual subsidies to be matched by lesser local grants or subsidies—all this in order that it may be possible to rent the new housing at rates which former slum tenants can afford. To assure that the housing will be available to none other than those of inadequate incomes, the Act sets the limit of cost at $4000 per family unit and $1000 per room, except in cities of over 500,000 inhabitants, where the maximum is $5000 per family unit and $1250 per room. It further provides that the housing be rented only to those who at the time of application are occupying substandard housing, and whose income is not over five times the scheduled rent, or in case of families of three or more minor children, six times the rent. To assure the final elimination of slums, the Act requires, with certain stipulated exceptions, the elimination of one existing substandard family unit for each family unit constructed. Thus in a clear-cut manner it deals only with families living under slum conditions and with the elimination of slums. The Act applies to rural as well as urban areas. Under the reorganization of February 1942 the functions of USHA were assumed by the Federal Public Housing Authority (FPHA).

[36] For a more detailed account of the Limited Dividend program see: Housing Yearbook", 1935, NAHO, *op. cit.* p. 1 *et seq.* "Urban Housing", Federal Emergency Administration of Public Works, 1936; "Slums and Housing", Ford, *op.cit.*, p. 733.

[37] For further details see "Urban Housing", *op. cit.* "Housing Yearbook", *op. cit.* 1936, 1937; also "Public Housing Tour Guide", National Public Housing Conference, 122 E. 22nd St., New York, Dec. 1, 1940, compiled by Catherine Bauer.

[38] See "Summary of Hearings on the Wagner Housing Bill before the Committee on Education and Labor of the U. S. Senate, April 20, 25 and 29, 1936", being a condensed record of significant points. National Association of Housing Officials, 1313 E. 60th St., Chicago, Ill.; also, "Hearings on Amendment to National Housing Act, 1936, 1937", and "Hearing Pursuant to Public Resolution No. 113,1939", Gov't Printing Office, Washington, D. C.

In the financing of projects, the USHA advances a loan for not more than 60 years, amounting to not more than 90 per cent of the cost, the remaining ten per cent of the cost to be supplied by the local community. To make possible rents at such rates as the former slum dwellers could pay, the Act provides for capital grants on annual payments to the local authority by USHA, to be matched by local grants or subsidies to the extent of 20 per cent of the total subsidy required. The usual procedure has been annual payments by USHA sufficient to assure the payment of the annual interest on the loan. The rate of the interest on the loan is the federal rate of interest at the time of making the loan (determined by the rate on U S Bonds) plus not more than 1 per cent, which has amounted to about 3 per cent. The local contribution to subsidy has normally been in the form of the remission of taxes and of the charges for public services (fire, police, sanitation, etc.). How all this has worked out we have discussed in the chapters on Policy, Family Incomes and Budgets, and on Design.

The USHA made great strides, more particularly in the urban areas. It has been the one agency which has succeeded in making definite inroads on slums and in supplying former slum dwellers with wholesome homes. It has been widely accepted and supported as a permanent government activity, doing a necessary constructive work. Up to January 1942, 29 states had passed Enabling Acts; there were 622 local housing authorities coöperating with the USHA; there were completed or under contract 491 projects and in the planning stages 277, a grand total of 768 projects, urban and rural. These include units for 197,719 families of which 7579 were in the rural areas; 420,000 persons were living in USHA and PWA homes, of whom 165,000 were under 16 years of age, 86,000 under six years.[39]

*Decentralization of Administration*

While under the Act the policy-making and directive forces remain centralized, the planning, construction and administration of all new projects was *decentralized*. The Act requires all the decentralized activities to be undertaken by local housing authorities created by local governing bodies. The projects must result from local demand and must be initiated, completed and maintained by the local authority, and eventually they become the property of the local authority free of any federal claim. Thus to make the Act of benefit to any city it became necessary for the state in which the city or rural community is located to pass an "enabling act" for the establishment of local housing authorities, granting them the necessary power and authority to carry on their work—notably the right to acquire land by condemnation and the right to issue bonds and sell them in the open market.

[39] Data from the annual report of Herbert Emmerich, commissioner of FPHA, in "Housing Yearbook", NAHO, 1942, *op. cit.*, p. 12–13.

*The Federal Public Housing Authority (FPHA)*

In the reorganization plan of February 1942, the Federal Public Housing Agency (FPHA) was created to take over the function of USHA. As a further step toward decentralization FPHA divided the area of the United States into ten regions, in each of which is a staff of technicians with authority to pass promptly on many questions which formerly had to clear through Washington, and to decide on the questions in the light of local conditions. In some regions the administrators have been slow in realizing the implications of the change of policy, but the system is fundamentally sound and in general is working well. For the contribution of FPHA to the war program, see Table IV, p. 37.

**Subsidized Housing in the Rural Areas:**
*Under USHA.*

Subsidized housing by the USHA in the rural areas was initiated in the fall of 1939. Four classes of low income rural families are included in its scope: (a) owners of small farms; (b) tenant farmers; (c) share-croppers; (d) rural wage workers.[40] While some *groups of housing* have been planned (the initial one in Montgomery County of southern Maryland), the usual procedure has been for the local county or rural authority to build *individual houses* on the farms. A number of *agricultural villages* have also been reported as under way. A farmer deeds an acre of land to the authority, who, through local contractors, builds a house, for which the farmer agrees to pay the rent whether he himself or a tenant occupies it. He further agrees to coöperate with the Department of Agriculture in a farm and home management plan.

The house may cost $1650 in some parts of the country, $2500 in others; the average over-all cost is about $2100, with rent at $82 a year, or $72 if the farmer does all ordinary maintenance and repair work. *See Plate XLVII C, p. 207.* These houses are built without a bathroom, but there is a large storage space which is so located that it can later be converted into a bathroom. By February 1942 there were 288 counties in 12 states participating in a program for which USHA has set aside $17,334,900. In the cotton belt there were built 6413 homes, in Florida 638, in Maryland, Indiana and Illinois 528.[41]

The USHA in rural areas, as in urban, has as its primary function the betterment of substandard housing conditions. The employing farmer's immediate inducement is the greater stability and efficiency of a laborer living in his own home. To bring about ownership will, however, require an amendment to the U S Housing Act of 1937, permitting sale to individuals, and a bill for such an amendment has been introduced

[40] "Rural Housing", United States Housing Authority, July 1940.

[41] "Homes for Farmers", *Public Housing*, Vol. 3, No. 5 (Feb. 1942).

in Congress.[42] In expanding its work to include aid to rural communities, the USHA has been in close coöperation with the Department of Agriculture as well as with local rural housing authorities.

There may have been some slight subsidy to rural housing in the Department of Agriculture, specifically for migrants, which we shall discuss a little later.

*Housing in the Department of Agriculture Including Former Subsistence Homesteads in the Department of the Interior, and in FERA*

The ramshackle rural housing which we see from car windows along the railroads and the highways and often increasingly as we get back on the dirt roads is commonly part and parcel of bad farming or poor land, or both. To correct these conditions the Department of Agriculture has long been working, and with increased activity since the recent depression. Housing improvement as part of the improvement of the economy of small farmers was included in the Homestead Plan developed by the Farm Credit Administration (FCA) operating under the Federal Farm Loan Act of 1916 and the FCA Act of 1933. At first loans were made to renters, but that gave way to long-term loans for ownership. Then, in 1937, came the Farm Security Administration (FSA), providing loans for tenants and farm labor. The rapid increase in recent years of migrant workers with their inadequate and unwholesome temporary camps, especially in the West, is another problem which the FSA has tackled. It seems pertinent to remark here that the Department of Agriculture was founded for scientific research in the broad field of agricultural economics and these same research methods seem to have been successfully applied to all its enterprises in housing. In the Department of the Interior, subsistence homesteads were encouraged for groups engaged in industry but living in nearby rural areas. The USHA, in coöperation with the Federal Works Agency and with FSA, organized work in the rural field in the spring of 1940. Such is the summary, now for more details.

*The Federal Farm Loan Administration (FFLA)*

Through all administrations since 1916, this organization has provided credit for various farm improvement uses under the direction of the Department of Agriculture. Its activities were extended by executive order (#6048) with amendments in 1933, 1935, 1937 to provide long term mortgage loans for farmers, to build farm houses and other buildings. Through the Federal Land Banks, loans have been made up to 50 per cent of the value of the land and 20 per cent of the improvements; and through Land Bank Commissioners loans up to 75 per cent of the appraised values of the property, but not exceeding $7,500 to one farmer. The primary aim is to aid in improving the farmers' economic condition, of which housing may form an important factor because of the effects of housing on health, morale and efficiency, both in the field and in the house. Most of the activities of FFLA were taken over by FSA in 1933—which will be discussed later.

*The Subsistence Homesteads Division, formerly in the Department of the Interior.*

A review of subsistence homes seems pertinent at this time because of their possible application to conditions which may arise in the post-war period. When the depression set in, during the early 1930's it took heavy toll of three groups of "stranded" families whom it was thought the Department of the Interior was able to help through subsistence homesteads. The aim was economic reconstruction, the methods were frankly experimental. One of the groups to be helped included a number of villages and towns (mostly coal-mining), whose population was made up largely of workers in industries which had shut down, apparently permanently, leaving the workers and their families stranded. Another group was made up of farm laborers and tenants, stranded on poor land during the low-tide of the depression. Still another group was industrial workers who, through intermittent employment at low wages, had annual incomes insufficient for the proper support of their families.

For these several groups three types of projects were set up under Section 208 of the National Recovery Act: (a) The placing of *stranded populations* in good homes and assisting them to become economically established; (b) the development of *agricultural colonies* and (c) the establishment of *workingmen's garden homesteads* in the vicinity of industries and industrial centers.[43] (a) For those stranded because of permanent shut-downs, other jobs were found where possible; where jobs could not be found the plan called for setting up new small local industries and such home industries and other handcrafts as the people could readily take up. (b) The agricultural group was above the relief level, but stranded on hopelessly poor land ("submarginal"), and for them the plan was to find better land where efficient agricultural colonies could be established. (c) For the industrial workers homestead colonies were to be established as near to the industries as good land could be had at low cost. The common factor in all the projects was enough tillable land to raise a part or all of the family food, and, in case of the agricultural colonies, the additional amount of land necessary for a cash income from crops.

For the stranded miners, colonies were established at Readsville, W. Va., ("Arthurdale"), Tygart Valley, W. Va., Westmoreland, Pa., and Cumberland, Tenn.[44] A total of 33 homesteads of all kinds, housing 3167 families, was undertaken in 17 states well dis-

[42] The foregoing data is largely from "Rural Housing", *op. cit.*

[43] Address by Bruce L. Melvin, Research Asst., Div. Subsistence Homesteads, before the American Society Ag. Engineers, Chicago, Dec. 3, 1934. Released by the Department of the Interior.

[44] "Services of Federal Government to Home Owners and Tenants", U. S. Information Service, Gov't Printing Office, Washington, D. C., 1935, p. 9.

tributed over the country, except that there were none in New England and New York State. These were turned over to the Resettlement Administration in June 1935, and in September 1937 passed under the jurisdiction of Farm Security Administration, Department of Agriculture. As of May 1940 nearly all had been completed and 17 of them had been turned over for management to non-profit associations formed by the residents, incorporated under the laws of their respective states and subject to taxation, the title to the property of each association, however, remaining subject to a government mortgage.[45]

*Subsistence Homesteads under Federal Emergency Reconstruction Administration (FERA)*

The subsistence homesteads started under Federal Emergency Reconstruction Administration (FERA) paralleled the foregoing, but varied somewhat as to the population aided, that is to say as to the past and future occupation of the homesteaders. It was in this homestead movement that the Economic Reconstruction Administration (ERA) in the different states, with the coöperation of the Federal ERA, encouraged the setting up of rural rehabilitation corporations.[46] Of these, 19 colonies for 1323 families were actually started under FERA in eight southern states, and in addition, 35 colonies for 1825 families in 22 states were planned under FERA, but were taken over in 1935 by the Resettlement Administration, which undertook the construction. Three other colonies initiated by FERA were taken over by the Farm Security Administration in 1940.[47]

*The Resettlement Administration*

The Resettlement Administration (RA), independent of any existing department of the government receiving funds from the Emergency Relief Act of 1935, took over in that year all the subsistence homesteads previously described, and in turn was taken over by FSA. In continuing the work of subsistence homesteads, RA envisioned two types of development, one "rural-agricultural", the other "rural-industrial". Of the agricultural type, said Mr. R. G. Tugwell, the Administrator: "The farmers are to be brought together in villages of from 50 to 500 families, where principles of coöperation and division of labor are to be put to work in their interest".[48] In the villages were to be the homes, schools, churches, warehouses, canneries, cotton gins, and the like. The system was a modern version of the time-proven system found in parts of rural France and some other European countries.

"The rural-industrial communities—we call them Greenbelt Farms—are pioneers in another field", wrote Mr. Tugwell, and continued: "A Greenbelt community is simply a community built on land in which every acre is put to its maximum economical use and in which the traditional demarcations between town and country are so blurred as to become almost indistinguishable."[49] They came to be called "satellite cities", which term in their descriptive literature and the term "Greenbelt" and references to English garden cities and garden suburbs, caused them to be confused with the Garden City idea of England. This was unfortunate, since they lack the essential characteristics of those cities, though as built they do correspond to a slight extent to English Garden Suburbs, as we shall point out presently. Because they have been associated with the garden city idea, they deserve further comment.

After exhaustive statistical studies, five cities with definite promise of expanding population were chosen, near which the Greenbelt towns should be located, and the plans were made. Actually three were completed; each for an ultimate population of 3000: Greenbelt, Md., near Washington, D. C., starting with houses mostly in rows, for 1000 families; Greenhills, O., near Cincinnati, with 1000 families; Greendale, Wis., near Milwaukee, with 750. *See Plate XLVII D1–4. p. 207.* These departed from the original conception and from the traditional Garden *city* idea in that they had no sustaining industries within the towns and provided housing for but one income group—in the Maryland project the group was mostly modestly salaried white collar federal workers from Washington. They departed from the tried and proved precedent of English Garden *Suburbs* in being at a considerable distance from the places of employment (whether measured by time or expense). In these two items, *i.e.*, location and type of population, they were also in violation of generally accepted principles of city planning. Topographically they were well planned, but introduced no new features either of planning or of housing. Being emergency measures, partly in the interest of reemploying the idle in both white collar and blue jean groups, costs were excessive and had to be greatly written down to put the property on a sound financial operation basis. Though the population pressure of the cities adjoining these projects was not relieved through decentralization of industry or employment, yet the housing and recreation pressure in those cities was relieved by the additional supply of good housing, which in itself is something.

The Resettlement Administration was discontinued in 1937 and the Farm Security Administration in the Department of Agriculture took over the work. At present FSA is the landlord for the Greenbelt projects and makes payments in lieu of taxes to the local, county and state government. There have been, how-

[45] Data from "Farm Security Administration Homesteads". Dep't of Agriculture, Nov. 1, 1940. p. 5. Gives a complete list of projects, classified by states and by initiating agencies, and with other data.

[46] *Ibid.*, and "Homesteads", FSA Dep't of Agriculture, 1940, May 23, p. 4.

[47] "Farm Security Administration Homesteads", Department of Agriculture, Nov. 1, 1940.

[48] NAHO Yearbook, *op.cit.*, p. 28, 1936.

[49] *Ibid.*, p. 29.

ever, movements to bring other strata of population into the Greenbelt towns and to have FSA sell each of them to a non-profit association formed by the residents. Early in 1942 each of these was reported as failing to meet operating expenses by something over $100,000. Greenhills was reported for sale at $11,-800,000.[50] As part of the Defense Program FSA was authorized to add 1000 units to Greenbelt, Md. Under the merger of housing agencies in February 1942, they were scheduled for transfer to the Federal Public Housing Administration. Also, in 1937, the Resettlement Administration passed over to the Farm Security Administration, for completion or operation, 146 other projects begun under RA and its predecessors.[51]

*The Farm Credit Administration (FCA)*

Most of the activities authorized by the Farm Loan Act of 1916 were taken over by FCA in 1933.[52] These activities included loans for new houses and for repairs, usually as a part of comprehensive farm improvements, which came to be typified by the Homestead Plan. The Homestead Plan was simple, quite similar to the homesteads of the Department of the Interior and of RA, previously described. The government bought good land, aided in building inexpensive but adequate homes and out-buildings, and gave settlers advice on the best farming methods. In some cases the farms were rented, in others bought, spreading their payments over a 40 year period and paying from 4 to 4½ per cent interest; in other words, they were self-liquidating. The projects were of two kinds, Rural Communities, and Scattered Farmsteads. *The Rural Communities* consisted of a number of farm homes centered together with their own school, store, and sometimes other community facilities, such as cotton gin or cannery. In most of the communities each family made its living by full-time farming. In others the farms were small in size and provided only part of the family's livelihood. Various trades and industries, either on the project or nearby, furnished the rest. *Scattered farmsteads* were established in areas where schools, stores and other facilities were already adequate. For this group loans were made for immediate needs and further arrangements could be made for either renting or buying the farmstead. "This type of project has now given way to the long-range program for helping farm tenants buy farms for themselves under the Bankhead-Jones Act."[53]

Of the loans made by FCA, the proportion going into improving the houses was small. The proportion going for all farm improvements, including houses, was about 4 per cent prior to 1932. Since then, up to January 1, 1942, it was about 7 per cent. Since May 1933 the average of actual loans for housing and improvements was somewhat over four million dollars.[54] There are no data to indicate the effect which these loans have had on a more wholesome home environment.

*The Farm Security Administration*

The Farm Security Administration (FSA) in the Department of Agriculture was established by executive order in 1937, under the Bankhead-Jones Farm Tenants Act. Through Resettlement Farm Purchase programs it makes loans for houses to *farm tenants*, *share croppers* and *farm laborers* who are American citizens, preference being given to those who can make a down payment or who have live stock or equipment.[55] "The task of FSA is to help these people get off the relief rolls and become permanently 'self-supporting'". Incidentally, we suggest that this might well be the aim in all subsidized housing, whatever form the subsidy may take. In some cases FSA finds that all that is needed is a small loan for the purchase of seed, tools, livestock, etc., dispensed under careful supervision; of these more than 800,000 families have made good on their loans. In other cases the farmers must be moved onto better land, which they buy on long term government loans. With similar loans they build new farm buildings and home. By these means, under the homestead plan, FSA has helped about 15,700 families to establish new homes on land capable of producing a decent living. Families are getting a new start on the 164 projects, scattered through nearly all the states.[56] To these activities were later added those taken over from other federal departments—the Homesteads Division, and Subsistence Homesteads (ERA) from the Department of the Interior, the Resettlement Administration, also in coöperation with USHA in rural areas, all of which we have previously described.

*Migrant Families*

Some 350,000 families with a total of more than a million men, women and children, wandering from state to state and county to county to earn a living as farm laborers; squatting on vacant land, living in improvised shacks as their ineffectual and unsanitary shelter (the home environment for their offspring and our future fellow citizens)—these have presented a unique problem in housing. They were typified by the "Okies" and the "Arkies" and dramatized in *Grapes of Wrath*. The defense program has increased this problem in two ways; (a) while farmers were pushing their output to the maximum, industrial demands grew heavily on farm labor, calling for increased mobility of migrant workers, and (b) immense new industries were established in rural areas, requiring temporary housing.

This problem of the migrants the Farm Security Administration had tackled to the extent of establishing

[50] "News Letter", American Society of Planning Officials, May and April, 1942.

[51] "Principal Federal Housing Agencies, etc." *op. cit.*

[52] Letter from FSA, Sept. 3, 1942.

[53] "Security for Farm Tenants", FSA, U. S. Dep't of Agriculture, July 15, 1940, p. 7.

[54] Based on data contained in a letter from FCA, Sept. 1942.

[55] "Security for Farm Tenants", FSA, Dep't of Agriculture July 15, 1940, p. 7.

[56] "Homesteads", FSA, Dep't of Agriculture, May 23, 1940.

25 *permanent camps* (as of early 1940), where about 5800 families, as they follow the progressive crops, can be accommodated in temporary, minimum, yet sanitary surroundings. Of these, 12 camps are in California, 4 in Texas, 3 in Arizona, 2 each in Idaho and Florida, and 1 each in Oregon and Washington—with from 200 to 350 families in each camp. The better to follow the crops, there were at that time several additional *mobile camps* completed and more under way, each for about 200 families, to be sheltered in tents erected on portable platforms, with tents for various community facilities: a first-aid and children's clinic trailer, an isolation tent and a bath-house trailer. The migrants in normal times were encouraged to settle down, and to this end, in connection with the camps, 559 permanent cottages were built, each with its subsistence garden. In these camps there are usually about 50 cottages to 350 temporary shelters, and in addition to this are 240 units in apartments of 60 units each, built of timber with galvanized iron roof. "In a few instances, the cottage residents have been able to lease a tract of nearby land, which they farm coöperatively. The surplus vegetables, milk and other food stuffs which they produce on their coöperative plot are usually sold to families living in the camp". The average cost of the house was $1459, of the apartment units $1660.[57] *See Plates XLV and XLVI, pp. 205, 206.*

The rent of cottages was $8.00 per month, of the apartments from $4 to $8, which represents a gross return of a little less than 5 per cent of the cottages and less on the apartments. These rents would appear to be inadequate to support the investment and to imply some form of subsidy.

With the war effort came demand for increasing amounts of food for our allies, and at the same time the army was drawing from farm labor. To meet this situation the FSA greatly increased the number of mobile camps, so that the farm workers can "move from one crop area to another as the growing season advances". These mobile camps are designed for use in areas where workers are needed for only a few weeks at a time. "At the end of 1941, FSA had completed 58 camps which would accommodate 13,674 families at one time. Each shelter is used by different families an average of four times a year, so that temporary quarters were actually furnished for more than 54,000 families."[58] *See also p. 242.*

In addition to the completed camps, at the beginning of 1942 there were under construction 43 additional camps, of which 27 were mobile, 16 permanent, with accommodations for 6,993 families, much of it for the benefit of the Pacific Coast and citrus fruit growers in other southern states. These new mobile camps consist of army type tents. Eighteen of them will move up and down the east coast from North Carolina to New York, and have available 40 camp sites. A panel of physicians drawn from nearby cities and towns will supervise FSA nurses in clinical services and preventive medical care. The camps under construction, together with those completed, bring the total to 101 and will provide shelter for 75,000 families in a 12-month period, with accommodations for 20,667 at one time.[59]

*Research in Rural Housing*

When the FSA took over the Resettlement Administration, studies in reducing the cost of farm houses were begun, first by reducing the plan to the minimum of adequacy, second by developing more economical construction. The economic limit for a farm unit (including house and outbuildings) was set at $2900 for southern climates and $4200 for the more exacting northern climates. In general, houses with bath and kitchen plumbing have actually cost $400 per room, while those without plumbing cost $250 per room.[60] Low costs have been obtained by plans and specifications developed under scientific guidance and by the use of pre-cutting and fabricating of unit parts at portable mills. Where 50 or more houses are built within a radius of 25 miles, prices are reported as low as $1,313 per house.[61] This, with an amortization period of 30 years and interest at 3 per cent, means a cost of $56 a year.

The migrant camps and the various types of war housing devised by FSA (to be described presently under "Defense Housing") all exemplify the fine results which have followed the traditional scientific approach of the Department of Agriculture. FSA, with its general experiences and the housing experience in the rural areas, has been coöperating with USHA since the inauguration of its program in the fall of 1939, an account of which work will be found under the accomplishments of USHA.

## The Tennessee Valley Authority (TVA)

Housing under the TVA has been incidental to the control of certain natural resources, the harnessing of several great river systems in order to control floods and to produce electric power for industrial and domestic purposes. While a federal undertaking, it was not national but regional in its scope, yet the region is so great that the scope is great enough to give it national significance. Except for the permanent town of Norris, the housing done directly by the authority has been essentially rural. *See Plate XLVII A, 207.*

The TVA housing began with extensive camps for the construction of the great dams, and has largely so continued (at Norris, Wheeler, Pickwick, Hiwassi, etc.). But soon provision had to be made for the resettlement of the population, mostly rural in the ex-

[57] "Farm Security Administration and the Defense Programs," Sept.–May 6, 1941, p. 9.

[58] C. B. Baldwin, Administrator, Farm Security Administration, in "Housing Yearbook, 1942". National Association of Housing Officials, Chicago, p. 28.

[59] C. B. Baldwin, *ibid.*

[60] "Homesteads", *op. cit.*, p. 6.

[61] W. W. Alexander, NAHO Yearbook, 1940, p. 180.

treme, which lived in valleys to be occupied by the extensive reservoirs and their accessories. Finally came the development of the permanent town of Norris, with its encircling greenbelt, anticipating an initial population of 2000 people, mostly executives and other white-collar employees. Actually the authority has here built 343 units, with rents varying from $12 to $60 a month, with a mean of $20 for a two-bedroom house costing in the neighborhood of $3000.[62] Because one party was at the same time client, designer and contractor, unusual opportunity was offered for applying the most enlightening housing methods, developed to meet specific local conditions. Some of their research work has been outlined in the chapter on Design.

### Defense and War Housing

Early in the summer of 1939 the executives of several federal agencies dealing with housing, through the agency of the Central Housing Committee, unanimously decided that coordination of their agencies was necessary for total defense against the threat of war. The Division of Defense Housing Coordination was promptly created by the National Defense Advisory Commission. Early in 1941, by an order from the President, the Division was taken out of the Defense Advisory Commission and put in the office of Emergency Management. The division was given final determination of needs and the setting of standards, while the Federal Works Administration was put in control of construction. Under the merger of housing agencies in February 1942, the Division passed under the jurisdiction of the Federal Public Housing Administrator (FPHA).

At the outset the Coordinator, Mr. C. F. Palmer, stated that his task and that of the Commission was "to see that the Army and Navy get what they need, when they need it, with no if's, and's or but's"; that "Defense housing is part of the total defense of any nation. Speed is paramount in doing the job, but the speed required is not incompatible with the principles of sound community development. It is as easy to build a house quickly that comes up to adequate standards as to build one that repeats the old mistakes of bad planning. The defense housing program can create neighborhoods which contribute to decent living."[63] The program, continued the Coordinator, "is based on the premise that the duty of the Coordinator is to see that sufficient housing—private, preferably, but if not, then public—is made available to meet emergency needs with such dispatch that National Defense does not suffer. This program gradually evolved through individual and collective recommendations from the official advisors of the various housing agencies, the Army and the Navy". In the main, "it included housing for families of enlisted personnel; for families of civilian employees in the Army and Navy; for such single civilian employees of the Army and Navy as have to be provided with housing; for single employees and for families of employees in privately operated industries engaged in the production of defense material. This program has five general categories: (1) Private Housing, (2), the RFC equity purchasing plan, (3) Federal Works Agency, (4) USHA, and (5) housing for the Armed Forces".

The plan was to assign to private industry the major portion of that demand which could pay commercial rents or corresponding purchase payments, when the need was considered to be a permanent one. The Coordinator further reported that in most of the areas this "private portion is being taken up at various rates by building and remodelling dwellings. FHA Mortgage Insurance and Building and Loan Associations, often members of the Home Loan Bank Board system, are very important factors in this field. We are establishing a current inventory to see how completely this market is being supplied. Every step in the program is designed to forestall any definite influence which would prevent private industry from fulfilling its obligations and making the most of its opportunity. . . . Private capital is being encouraged to act by leaving to it the entire field of housing for sale. Governmental operations are now confined to rental projects. In most cases, the rent per month will be higher than the installment under the monthly purchase plan".

When an unprepared nation is impelled, in self-defense, to begin war, speed becomes a vital and paramount necessity. So funds had to be found without the delay of congressional debate. They were found in several agencies: (1) The allocation of $10,000,000 to RFC Mortgage Company; (2) the foregoing funds were supplemented by $40,000,000 through the proceeds of mortgages on such projects as are insured by FHA under Section 207 of the National Housing Act—making a total of $50,000,000. Meantime the Lanham Bill was rushed through Congress and provided $150,000,000, to be administered by FWA, which utilized its own department of design and superintendence for the general architectural services. Another $100,000,000 was early made available through an amendment to the Defense Bill. Also in the interest of speed, as well as the secrecy of plans, the Navy and to some extent the Army, designed and produced their own housing, utilizing for construction purposes such agencies, private or public, as they could control. This procedure made it possible to begin the preparations of plans without waiting for the appropriation necessary for construction.

The needs immediately reported were for about 129,000 units in 39 states and 8 possessions, while the estimate of foreseeable requirements were for from 160,000 to 180,000 units, which at an average cost of $3500 would total $700,000,000. In January 1942 an amendment to the Lanham Act was introduced to

[62] Letter from a TVA official, October 21, 1940.

[63] These words and much of the data in the early part of this review are from an address delivered by Coordinator C. F. Palmer before the Central Housing Committee, Washington, released by the National Defense Advisory Commission, Oct. 5, 1940.

provide an extra $590,000,000, which would make a total of $890,000,000 from all the sources mentioned. Funds continue to be allowed as the emergency requires.

In the case of defense housing needed for families of low income, unable to pay commercial rents, and particularly for families of enlisted personnel and of low income industrial workers, when these were in localities where competent housing authorities existed and where funds were available, there was an effort to make use of such *local authorities* when the work was under the jurisdiction of the United States Housing Authority or its successor, the Federal Public Housing Authority. Thus the plan was that the type of housing best adapted was to become a part of the orderly growth of the community. Where housing had future rural use, FSA came into play to make available its experience and facilities in ways which we will describe presently. WPA was also available for construction of utilities in connection with housing projects.

Up to January 1, 1942, "FWA (in charge of production since early 1941) and other agencies and local authorities whose facilities the administrator was authorized to use by common consent, completed under the Lanham Act 41,005 dwelling units constituting all or part of 188 separate projects. Contracts had been let for 300 projects comprising 79,795 dwelling units; projects that had been assigned to constructing agencies totaled 381, comprising 101,182 dwelling units".[64] In 1941, in defense areas private construction of residences at a price level suitable for defense workers amounted to about 240,000 units.[65] Table XXV A shows the program for federal agencies up to February 1942, and shows the type of buildings and by what agencies they were to be constructed. Table XXV B indicates the accomplishment after January 1942, when FPHA took over the former Defense Housing as War Housing.

In the projects are families of men in war industries, flying fields, naval bases, and shipyards. Rents for industrial workers have averaged $30 per month; for civilian employees and enlisted men in the Army and Navy entitled to allowances for quarters, from $21 to $26; for enlisted men not entitled to quarters $11 to $15. Local agents for the construction of housing were housing authorities, FSA and TVA where they were available; elsewhere special management organizations were set up. Being government properties, they are exempt from taxes; but where normal public services were rendered, a payment of 14 or 15 per cent of the shelter rent was paid to the local governments.

One very important field new to our federal agencies was opened up when, under the Lanham Defense Act, two coöperative housing or mutual ownership projects were started in 1941 by FWA for the shipbuilders at Camden, N. J. The projects were to be leased to a local corporation, of which the common stockholders were to be the people living in the project. They were to run the project on the basis of the procedures, bookkeeping and accounting methods set up

TABLE XXV

A. Public Defense Housing; Number of Units Programmed for Constructing Agencies, and Their Estimated Cost
(Cumulative from date funds became available to Dec. 27, 1941)

| | Family Units | Trailers & Portables | Single Room Units | Estimated Cost |
|---|---|---|---|---|
| Army | 1,370 | — | 295 | $5,480,000 |
| Navy | 19,784 | — | 1,400 | 79,136,000 |
| Defense Homes Corporation | 3,730 | — | — | 14,920,000 |
| USHA | 35,576† | — | — | 142,304,000 |
| Local Housing Authorities | 1,200 | — | — | 4,800,000 |
| FWA—Total | 65,319 | — | 850 | 261,276,000 |
| (a) Public Bldg. Administration | 35,577 | — | 850 | (142,308,000) |
| (b) Mutual Ownership Housing Div. | 6,550 | — | — | (26,200,000) |
| (c) Division of Defense Housing. | 23,192 | — | — | (92,768,000) |
| Farm Security Administration | 2,685 | 7,545 | 8,506 | 10,720,000 |
| TVA | 690 | — | — | 2,760,000 |
| Total | 130,354 | 7,545 | 11,051 | $521,416,000* |

* Except for certain typographical corrections, this table appears as Table II in Mr. Palmer's report in "Housing Yearbook, 1942," p. 52.

† Includes projects constructed under the provisions of Public No. 671, 76th Congress and projects constructed under the Lanham Act (Public No. 849, 76th Congress).

B. Active War Housing, as of April 30, 1944 under the Jurisdiction or Control of the Federal Public Housing Authority*

| | Dwelling Units | |
|---|---|---|
| Federally Owned: | | |
| Lanham Act, Title I (849) | 359,082 | |
| Lanham Act, Title IV (522) | 742 | |
| Temporary Shelter Act (9) | 111,189 | |
| Army-Navy Appropriation Act (781) | 4,186 | |
| Defense Homes Corporation | 11,478 | |
| U. S. Housing Act—Defense Amend. (671) | 7,274 | |
| U. S. Housing Act—War use (412) | 3,173 | |
| Maritime Commission | 9,747 | |
| Defense Plant Corporation | 2,891 | 509,762 |
| Locally owned | | |
| U. S. Housing Act—Defense Amend. (671) | 44,186 | |
| U. S. Housing Act—War use (412) | 7,944 | 52,130 |
| Grand Total | | 561,892 |

*Under the reorganization of 1942, FPHA took over all Defense Housing and War Housing, except that on military reservation farm areas.

[64] Defense Housing under the Lanham Act, by Brig. Gen. Philip B. Fleming, Administrator Federal Works Agency, in Housing Yearbook, 1942, op. cit. p. 56–63.

[65] Chas. H. Palmer, Coordinator, in "Housing Yearbook", 1942, p. 47.

by the federal government.[66] As a measure of assuring the intent of the experiment, the federal government was to hold preferred stock. Under a modified agreement six other projects have been built under Mutual Ownership. The complete list is: Audubon Park, Audubon, N. J.; Avion Park, Grand Prairie, Tex. (*Plate XIV C*); Walnut Grove, South Bend, Ind.; Pennypack Woods, Philadelphia, Pa.; Winfield Park, Linden, N. J.; Dallas Park, Dallas, Tex.; Belmar Park, Belmar, N. J. (*Plate XIV A*); Greenmount Village, Dayton, O.

For the production of war materials the government has established huge factories in many localities, often remote from large centers of population, necessitating the evacuation of the rural population from large areas. The Farm Security Administration (FSA) has been given the job of reestablishing these populations. Where existing housing was not available, FSA has supplied new one-story houses, with the floor plan similar in a general way, to other FSA and USHA farm houses, but all built of prefabricated sections constructed at a mill, and shipped to the site by truck or train. They are set on concrete pier foundations and painted with a spray gun—"Extremely rapid construction."[67]

FSA has also been responsible for providing four permanent defense housing projects, with the number of family units in each varying from 72 to 1000—1422 in all. They consist of single houses, except at Greenbelt, Maryland, where the 1000 units are in multi-family groups, to conform with the others in the project. Another phase of their defense work consists of temporary housing trailers, dormitories and demountable houses. By January 1942, allocations for 16,500 such units had been approved and subsequently the number almost doubled before this phase of FSA work was turned over to NHA, as part of FSA's "non-farm housing program". *See Plates XLV, XLVI, pp. 205, 206.*

The trailers were devised to supply shelter while permanent housing was being constructed. They could be made ready for use within 60 days after an allocation was made. The trailers were of plywood and pressed fibre board, 8 by 22 feet, with painted canvas roof. Expansible trailers were, when expanded, nearly twice as large. The utilities in these trailer camps include toilets, showers, lavatories and laundry tubs, housed either in utility trailers or demountable houses. Portable houses were prefabricated, single or duplex. A duplex house consisting of living room, kitchen, one or two bedrooms, and a bathroom of standard size, cost $2,860 (no land). All furniture (including stove, refrigerator, oil space-heater and window shades) cost on the average $217.

Throughout this period the demand for defense housing and the difficulty of providing it had been steadily increasing. The two major difficulties, which early developed, were priorities for materials needed in war industries, particularly metals, and the growing shortage of labor due to the absorption of manpower by war industries. But an even greater difficulty arose when new industries were planned at points remote from population centers, or even in existing populous industrial centers, when the expansion was of such proportions as to necessitate the migration of the future employees. Another difficulty lies in the fact that national strategy must of necessity be constantly changing with the changing conditions of the war itself, including that all important guess as to the strategy and staying power of the enemy.

At the beginning of 1942 Mr. Blanford, Administration of NHA, estimated that provision would have to be made for 1,600,000 migrant workers,[68] quite a jump from the original estimate of 160,000 to 180,000 family units. We have seen how FSA was handling this in the rural areas even for the benefit of nearby urban areas, which methods, in principle and with slight variance, probably offer the best general pattern for much of the defense housing, since they provide both temporary and permanent housing and assume the full use of all existing housing. But to supply houses for the great numbers who need them, especially to do so in the face of increasing limitations on priorities and scarcity of labor, has presented a problem for which the answer was not easy.

Obviously, of the 1,600,000 workers, many were single. Furthermore, some married workers have left their families behind as do the soldiers and sailors joining the armed forces. These two factors have somewhat simplified the problem, as dormitories, besides greatly reducing the number of rooms, afford great economies in plumbing and installations, which are the great consumers of metal. The construction of these dormitories and other temporary housing and the renovation of obsolete buildings in part was made necessary by the disfavor with which the suggestion of billeting war workers was received.

There was opposition to temporary housing from some who were impressed with the great need of more permanent good low-cost housing. They saw a greater sum made available for defense housing in a year and one-half than had been made available to USHA in five years ($890,000,000 against $866,000,000, including local appropriations), and they saw the program expanding many fold. They felt that the war emergency afforded an opportunity to improve the supply of permanent good housing, and that the opportunity should be made the most of, that to the maximum extent possible defense housing should have those characteristics which would enable it to fit into the permanent housing program. Quite probably all those government agencies which are active in the defense housing program recognized the soundness of the

[66] Col. Lawrence Westbrook, in "Better Homes for American Workers", extracts of address at 10th Annual Meeting, National Public Housing Conference, New York, 1941, p. 111.

[67] Most of this data on FSA Defense housing is found in "Rural Housing" by the Farm Security Administration, Dep't. of Agriculture, Sept. 1941.

[68] Address before NAHO Convention in Baltimore, May, 1942.

principle but their estimate of what was possible in the emergency differed from that of those who were not so close to the problem of carrying out the program.

There was also some opposition to the idea that the living standards of industrial workers be in any way lowered, even during this critical period. Again the question is not so much one of ideals as of feasibility. If the doughboy, and his officers, can sleep in dugouts deep under ground, they are lucky; if he has time to eat his emergency rations three times a day as he fights, he is lucky; he also is apt to consider himself lucky if he is billeted in a home, instead of living in improvised structures; as for bathing, when it is time for a bath it may also be time for de-lousing. The living conditions of the soldier could be as good as that of his family, if all were kept within our own borders, while we waited for the enemy to come to us. The outcome of such a policy we can visualize by looking at war-time conditions in Poland, France or Greece. To avoid this meant the maximum of sacrifice on the part of the entire population. If the draftee could take it, why not the industrial worker? Could we in justice have two standards, one for those in khaki and navy blue and another for those in blue jeans? Life as usual is impossible in an all-out war. It was a question of whether the production of normal housing is more important than the immediate production of the maximum amount of guns, shells and ships.

In the production of housing by private enterprise there was also the desire to maintain the "status quo ante", or "business as usual" attitude—the best possible profit on all investments. This is why in housing built by private industry, with priorities based on the assumption that it was for industrial workers, a large proportion was occupied not by those migrants employed in essential industries for whom the government had helped to finance the housing, but was occupied by those who promised to be the most permanent, or for other reasons, the best tenants.[69]

### The Inter-Relation of Federal Agencies

The large number of federal housing agencies and their diverse activities has been confusing to the public and to Congress. To this confusion has been added open rivalry between some agencies, a rivalry arising from two principal sources, (a) differences of opinion on fundamental principles, (b) competition for public support and public funds. The two major groups of opinion are those whose main interest is producing low-cost housing through publicly owned and operated projects, and those whose main interest is increasing the supply through private enterprise.

[69] The National Committee on the Housing Emergency, a voluntary group, whose officers include many of the best known housers in the nation, has issued a comprehensive report discussing this problem from many angles: "Recommendations of the National Committee on The Housing Emergency", 512 Fifth Avenue, New York City, May 1942.

The competition for public support has followed the familiar pattern, which grows out of the fact that each bureau, agency and department of government, at whatever level, must ask some legislative body for the funds to carry out its project. Because of this it is common practice for public agencies (a) to encourage the organization of civic bodies interested in the activities of the various agencies, and ready to use their influence with legislative bodies, and (b) from within their own organizations to carry on publicity programs. In some agencies these activities have been purely educational, in others they have seemed to savor of "propaganda"—by which we mean a statement essentially one-sided, usually couched in emotional terms. In a measure introduced in Congress in 1942 the proposed budget items for publicity of certain housing agencies was omitted. With all housing activities merged into one unified plan, under a common administration all can see the inconsistency of such inter-agency competition.

In 1939 there was an actual merger of several of the agencies carrying out various phases of financing in connection with loans to private housing enterprises, merged in the Federal Home Loan Bank Board. As early as June 1935 the President had authorized the organization of the Central Housing Committee, for the purpose of bringing about some adjustment of the policies and procedures of those government departments or agencies concerned with housing, and of coordinating of their efforts. While the Committee consisted of principals or alternates of eight federal agencies, it had no administrative power and its work was carried on by technicians from the various agencies working on sub-committees. It brought about cooperation in research, drawing in many organizations from outside its membership, but as to policies and procedures, its recommendations were not binding. The Office of Defense Coordinator was created on recommendation of the Committee. The Committee went out of existence with the merging of all housing agencies under NHA, in February 1942.[70]

The merger of 1942 did not affect the agencies in the Department of Agriculture, as is shown in Table II, except in relieving it of the "Greenbelt" projects. For purposes of administration, it seems reasonable thus to keep separate the agencies operating in the rural areas and in the urban areas. There should, however, be some uniformity in the basic policies of both fields, and, for that matter, possibly even in the housing supplied to the armed forces or other government employees wherever they may be. To accomplish this there is needed some central policy forming body—such as we propose in the chapter on Public Policy—*p. 52.*

[70] For more complete information see the first and the last annual reports in the Housing Yearbook, 1936 and 1942, by Horace W. Peaslee, Executive Secretary throughout this period.

## APPENDIX B.
## THE BIBLIOGRAPHY OF HOUSING

Housing literature is vast. In December 1935, "Housing Index-Digest", which was issued by the Central Housing Committee, announced the acquisition of a library containing 600 books, 6,000 pamphlets, 35,000 classified references, and 8,600 diverse other items. After that, up to 1942, the "Index-Digest" appeared twice monthly with about 40 to 50 pages 8″ by 10″, containing additional concise annotated references to further organize the flood of housing literature. Beside this, the same Committee issued a "Legal Digest" in the special field of legislation and decisions of the courts, also occasional documents on special subjects. A four page bibliography of only the bibliographies (from 1901 to 1936) is contained in James Ford's "Slums and Housing", Vol. II.

A general discussion of housing literature which is both interesting and scholarly will be found in Dr. Carol Aronovici's "Housing the Masses". A well selected and classified bibliography was published in "Housing Officials Year Book, 1937". A later selected bibliography is included by Elizabeth Coit in "Housing from the Tenant's Point of View"—Architectural Record, April, 1942, p. 84.

A most comprehensive and authoritative literature on housing is found in the reports of the organizations whose membership is made up of those who are officially or otherwise active in the field of Housing. Reference to specific documents of many of these organizations are found in the text.

*International Publications*

There are two such organizations with international membership, both of long standing: The International Housing Association, with offices formerly in Frankfurt, Germany; and the International Federation of Housing and Town Planning, with offices formerly in London. Their principal reports are of the discussions in conferences held from time to time in various European countries. The last conference was a joint meeting of the two organizations held in Paris in 1937, at which time the offices for both organizations were merged and located in Brussels. The reports of this conference are frequently referred to in this book in the section on Housing in Northern Europe, and those references will give some notion of the authority of these reports; but the full significance of the discussion can be had only by attending such a conference. All reports are published in three languages—English, French and German, in any of which the reports may be heard in the conferences. They also issue "Housing and Town Planning," normally appearing quarterly. With the outbreak of war the office was again moved to Frankfurt, presumably arbitrarily. For references see end of section on Housing in Northern Europe.

The Housing Committee of the London County Council has made extensive studies of their own problems and of various solutions of the problems as they have been met in other countries of Europe. The reports of these studies are a valuable contribution to housing literature. The Housing Center of London, an unofficial organization, publishes housing literature and acts as distributors for other publishers, public and private. For references see end of section on Housing in England and Northern Europe.

*Publications by Public Agencies*

The National Resources Committee made extensive scholarly research into all fields of the national economy, some dealing directly or indirectly with housing—population, family income, family expenditures, etc. For references see especially end of sections on Population and on Rehabilitation.

The annual reports and technical bulletins of the various federal housing agencies are in general reliable documents, but some of the literature which has been most widely distributed often has left much to be desired in the way of carefully weighed statements. See end of Chapter on Federal Agencies.

The New York State Housing Authority in Albany and the New York City Authority both have published valuable documents on housing at home and abroad. For references see end of Chapter on New York City, on Rehabilitation, and on Design.

The Division of Urban Studies of NHA since 1942 has issued periodic "Abstracts of Selected Material on Post-War Housing and Urban Development" which forms a continuing bibliography, picking up where the "Housing Index-Digest" left off.

*Publications by Professional Societies*

Many organizations of special professional and business groups and of groups of several professions and laymen, all interested in housing, issue documents of value, many of which are referred to throughout the book. Aside from the list which follows there are many others, whose reports can be had through their local affiliates.

The American Institute of Architects (AIA), beginning in 1920 with "The Small House Service Bureau" (a movement to substitute well designed and well built houses for the prevailing jerry-built houses), in the last decade expanded its field with standing committees studying and reporting all phases of housing, and through its own publications and the daily press disseminated much information and extended its influence from its Washington headquarters throughout the country. It administers a number of *scholarships* and fellowships, which may be available to architects wishing to make housing studies. *Journal of American Institute of Architects* published monthly; bulletins occasionally. The Octagon, 1741 New York Ave., N.W., Washington 6, D. C.

The American Institute of Planners (AIP) organized in 1914, publishes *Journal of American Insti-*

*tute of Planners* (formerly *The Planners Journal*) a quarterly containing many articles bearing on housing and redevelopment, also occasional papers and an annual report containing discussions. Room 7-231 Massachusetts Institute of Technology, Cambridge 39, Mass.

American Planning and Civic Association, organized in 1904, interested in all phases of Planning including Housing, specializing in national problems including National and State Parks and Forests. Publishes "Civic Planning Comment" monthly; "Planning & Civic Manual" records the proceedings of the annual convention. 901 Union Trust Building, Washington 5, D. C.

The American Society of Public Health Officials in 1938 organized a committee of Hygienic Housing under the leadership of Dr. C.-E. A. Winslow and issues reports of outstanding value, dealing with the scientific principles underlying healthful housing, a number of which are referred to in the text. 310 Cedar Street, New Haven, Conn.

The American Society of Planning Officials, (ASPO), organized in 1934, publishes a monthly *News Letter* and occasional papers. 1313 E. 60th St., Chicago, Ill. "Planning", records the proceedings of annual conventions.

The National Association of Housing Officials (NAHO), organized in 1934 holds national conferences and publishes the more important papers there presented. The Association also publishes reports and bulletins on special phases of housing, particularly those dealing with policies and the administration of housing projects. Its "Year Book", beginning in 1935, gives a summary of all types of housing activities during the year, including reports from the head of important housing agencies. Beginning about where the publications of the National Housing Association left off, it forms a continuing history of American housing, and contains occasional papers on foreign housing of special interest. It also publishes a monthly *NAHO News*, which in Oct. 1944 became the *Journal of Housing*. See references in Chapters on Policy, Population and others. 1313 E. 60th St., Chicago, Ill.

The National Public Housing Conference, organized in 1932, published a monthly *National Housing Progress* which in Jan. 1944 became *Public Housing* (a title formerly used by a USHA serial) and occasional addresses and reports. See references in Chapter on Policy. 112 E. 22nd St., New York 10, New York.

The Urban Land Institute (ULI), founded in 1940, especially active in the field of urban rehabilitation, publishes a monthly *Bulletin*. See references at end of Chapters on Policy and on Rehabilitation. 1737 K St., N.W., Washington, D. C.

The National Planning Association, organized in 1942, publishes occasional documents. See reference at end of Chapter on Rehabilitation. 1721 Eye St., N.W., Washington, D. C.

The National Conference on Postwar Housing is characterized by a policy of bringing together about the conference table all those interested in housing, of whatever divergence of view. The "Proceedings" of the 1944 conference is a compendium of such views. *CIIC Housing News* is issued monthly. 512 Fifth Ave., New York 18, N. Y.

A number of metropolitan organizations, made up of all who are interested in housing, have also made valuable contributions; notable among these is the Citizens Housing Council of New York, which publishes a monthly *Digest* and occasional documents.

*Publications by Foundations*

Valuable reports come from several foundations for research into the design and construction of small houses. The first two listed below build experimental houses which are subjected to tests:

The John B. Pierce Foundation, Hygiene under Dr. C.-E. A. Winslow, 290 Congress Ave., New Haven, Conn. Construction and Silicosis formerly under Robert L. Davison, 40 W. 40th Street, New York.

The Albert Farwell Bemis Foundation. John Burchard, Director, Massachusetts Institute of Technology, Cambridge, Massachusetts.

The Twentieth Century Fund, has a Housing Committee, with a research staff, publishes occasional pamphlets and books; See "Colean" List of Books in following. 330 W. 42nd St., New York, N. Y.

*Magazines*

The *Architectural Forum*, and the *Architectural Record* and *Pencil Points* all publish illustrated articles on housing projects as completed and timely articles on current housing subjects. The *American City* has frequent articles on housing and related subjects. The illustrations of the three architectural magazines constitute an invaluable library of housing design, one which was an indispensable aid to this author in selecting the illustrations for the plates on housing in the United States.

Thus it will be seen that the problem for the bibliographer is one of selection and classification. In this book the foot notes in each chapter form bibliographies in the field of each chapter or part of the book.

### A Short Annotated List of Books on the Broader Aspects of Housing.

The following is a short list of books on the general subject, the scope and character of each being indicated in the annotation.

Aronovici, Carol, "Housing the Masses," John Wiley & Sons, N. Y., 1939, 289 pp. 6½″ x 9¾″. Treats of the principles of housing, with emphasis on the social and economic implications. Excellent chapter on housing literature.

Bauer, Catherine, "Modern Housing," Houghton Mifflin Co., N. Y. 1934, 330 pp. 6″ x 9½″, copiously illustrated. Deals with past experience, current practice and European housing up to 1934, as seen by the author at first hand.

"Public Housing Tour Guide," National Public Housing conference, 122 E. 22nd St., New York, Dec., 1940, 50 pp. 3½″ x 11″. A text

of all public housing (PWA, USHA, FSA) and limited dividend projects, arranged by states and cities, with essential data as to size and character of each project.

Colean, Miles L., "American Housing, Problems and Prospects," Federal Findings by Colean, Program by the Committee. The Twentieth Century Fund, 330 W. 42nd St., New York 18, N. Y., 1944, pp. 455, 6½″ x 9½″. Deals with both social and economic aspects, with emphasis on the production—numerous valuable tables.

"Housing for Defense," Published under the same auspices as the above, 1940, 186 pp.

Denby, Elizabeth, "Europe Re-housed." Foreword by Walter Gropius. W. W. Norton & Co., Inc., N. Y., 1938, 279 pp. 6″ x 8½″. 32 Plates, numerous line drawings in text. Backed by eight years of practical experience in slum clearance and rehousing in England, and a year of investigation in continental Europe; observations relate to broad principles, policies, legislation, vital statistics, details of housekeeping in Sweden, Holland, Germany, Vienna, France and Italy.

Ford, James, in collaboration with Morrow, Katherine, and Thompson, George N. "Slums and Housing," with Special References to N. Y. City. History, conditions, policy. Appendix (Mainly architectural) by J. N. Phelps Stokes, Harvard University, Cambridge, Mass. 1936. 2 vols. 7″ x 10½″, 1011 pp., 806 illustrations. An exhaustive study of housing conditions in N. Y. City from colonial times, with plans and views of all significant local housing efforts since the Civil War. Also gives extensive information on conditions and accomplishments throughout this country and abroad. Treats broadly of housing and related city planning problems. Excellent for general reference up to 1936.

Graham, John, Jr., "Housing in Scandinavia—Urban and Rural," University of North Carolina Press, Chapel Hill. 1940. pp. 216, 6″ x 9″, illus. 39. Foreign observations and facts (collected with the aid of housing officials) together with their background of political philosophy form the text for discussing the problem in the U. S. An intensive study of housing in Norway, Denmark and Finland, made on the ground by an architect of mature experience.

Hegeman, Werner, "City Planning—Housing," Vol. III, A Graphic Review of Civic Art 1922–1937, edited by W. W. Foster and R. C. Weinberg, foreword by Sir Raymond Unwin, Architectural Book Publ. Co., Inc., N. Y., 1938. Introduction, preface, and 162 pp. 12″ x 16″, of annotated illustrations numbered to 1144 plus 4 pp. diagramatic data from many countries. Primarily a reference book of design, but the foreword and annotations form a valuable text.

National Association of Housing Officials. 1313 East 60th St., Chicago. "A Housing Program for U. S.," 1934, 22 pp. A concise statement of the findings of the Baltimore Housing Conference, following a survey of U. S. conditions by Sir Raymond Unwin, Miss Samuels and Mr. Kahns. An important document. A more complete report of the above conference was issued in 42 pp., 1935. "Housing Officials Year Book," beginning with 1935. Report of conditions and progress in the U. S. during each year, with reports from heads of federal agencies, local authorities in U. S. and occasional reports from abroad. A valuable reference work. Average about 200 pp. 6″ x 9″.

Reiss, Richard L., "British and American Housing," National Pub. Housing Conference Inc., New York, 112 E. 19th St., 1937. Pp. 109. 5½″ x 7¾″. Capt. Reiss, since 1912 officially active in British Housing through various national commissions, London County Council and as trustee for Hempstead Garden Suburbs, for Latchworth and for Welwyn Garden Cities, visited U. S. housing at invitation of UPHC in 1939 and reports his findings in this important document.

Dorothy Roseman, "A Million Homes a Year", Harcourt, Brace and Company, New York, 1945. Deals with the present obstacles to the production of good housing at low cost, and points to ways of removing them.

Strauss, Nathan, "The Seven Myths of Housing," Alfred A. Knopf, New York, 1944. pp. 314, 6″ x 8½″. Mr. Strauss writes from the wide experience gained as a member of the New York City Housing Authority, as owner of a large United Dividend Project, and as administrator of USHA. The emphasis is on public housing.

Wood, Edith Elmer, "Slums and Blighted Areas in the United States." U. S. Government Printing Office, Washington, 1935, pp. 126, 5¾″ x 9¾. Illus. A sociologist long an authority on housing discusses existing conditions and needs, particularly in the light of the real property inventory of 1934. Cites beneficial results of British housing.

"Introduction to Housing, Facts and Principles." U. S. Housing Authority, Washington, 1940. pp. 161. 5¾″ x 9¾. Plates, charts and tables. A comprehensive, concise, factual and forceful presentation of the subject by an eminent authority.

Wright, Henry, "Rehousing Urban America," Columbia University Press, 1935, pp. 168, 8½″ x 11½″, 187 illus. and 8 tables. By a planner of outstanding gift and experience who wrote with precision and breadth on the technique of the planning of housing and housing sites. A year spent in the office of a leading German houser and in touring Germany gives the chapter on Germany a unique value.

For periodic publications of various organization, see the foregoing text. For specific subjects, see end of chapter.

## On the City Planning Background

Adams, Thomas, "Recent Advances in City Planning," N. Y. Macmillan Co., 1932. 399 pp. 7½″ x 10″.

Black, Russel Van Nest, "Planning for the Small American City," Chicago, Public Administration Service, 1938, 90 pp. 7¾″ x 10½″ unbound. Has bibliography. Revised edition, 1944.

Hubbard and Hubbard, "Our Cities of Today and Tomorrow," Cambridge, Harvard University Press, 1929, 389 pages, 7″ x 10″.

Saarinen, Eliel, "The City, Its Growth, Decay, and Future," Reinhold Publishing Corporation, New York, 1943, 379 pp., 6¼″ x 9¼″.

Sert, José Lois, "Can Our Cities Survive?" Cambridge, Harvard University Press, 1942. 259 pages, 12″ x 9¼″.

Others are cited throughout the text.

### *Envoi*

"The future belongs to those who fuse intelligence with faith, and who with courage and determination grope their way forward from chance to choice, from blind adaptation to creative evolution."

CHARLES E. MERRIAM

# Index of Names

# Index of Subjects

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# THE ART OF BUILDING CITIES

*by Camillo Sitte*

Translated from the German by LT. CHARLES T. STEWART, U.S.N.R., Former Director, The Urban Land Institute

So completely modern in its approach to the problem of urban planning is this historic book that its first appearance in English will be welcomed by architects and city designers throughout America and the British Empire. This is a doubly significant moment for its publication: the growing surge of interest in slum clearance and general reconstruction of cities in this country, to provide more hygienic as well as more artistically satisfactory living conditions, together with the staggering problem of rebuilding English and continental cities ravaged by bombing make a widespread knowledge of sound planning principles a vital necessity.

Originally published in Vienna in 1889, this volume went through several German editions, and was also translated into French. The original illustrations are reproduced in the English translation, and the translator has sought earnestly to retain the flavor and original spirit of the author's words. The modern nature of Sitte's ideas is reflected in the vigorous, readable type and in the unusual format. In addition to the original text, the book contains a foreword by Eliel Saarinen, an introduction by Ralph Walker and a supplementary chapter by Arthur C. Holden, illustrating the application of Sitte's theories to the layout of parts of New York City and Washington, D. C. There are also a preface by the translator and Sitte's prefaces to the various foreign editions.

This book will be refreshing indeed to those who feel—and who does not?—that our great cities are inexcusably overcrowded with buildings, and poorly organized for living and working. Sitte devotes particular attention to the location and planning of public squares, plazas, courts, monuments and recreation areas, using as models such famous cities as Rome, Vienna, Trieste, Nuremberg, Hanover, and others. Sympathetic in treatment, architecturally sound,—above all practical and constructively modern in its outlook—this handsome volume will be an attractive and indispensable addition to the library of every architect and city-planning official.

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